

FIG. 1A

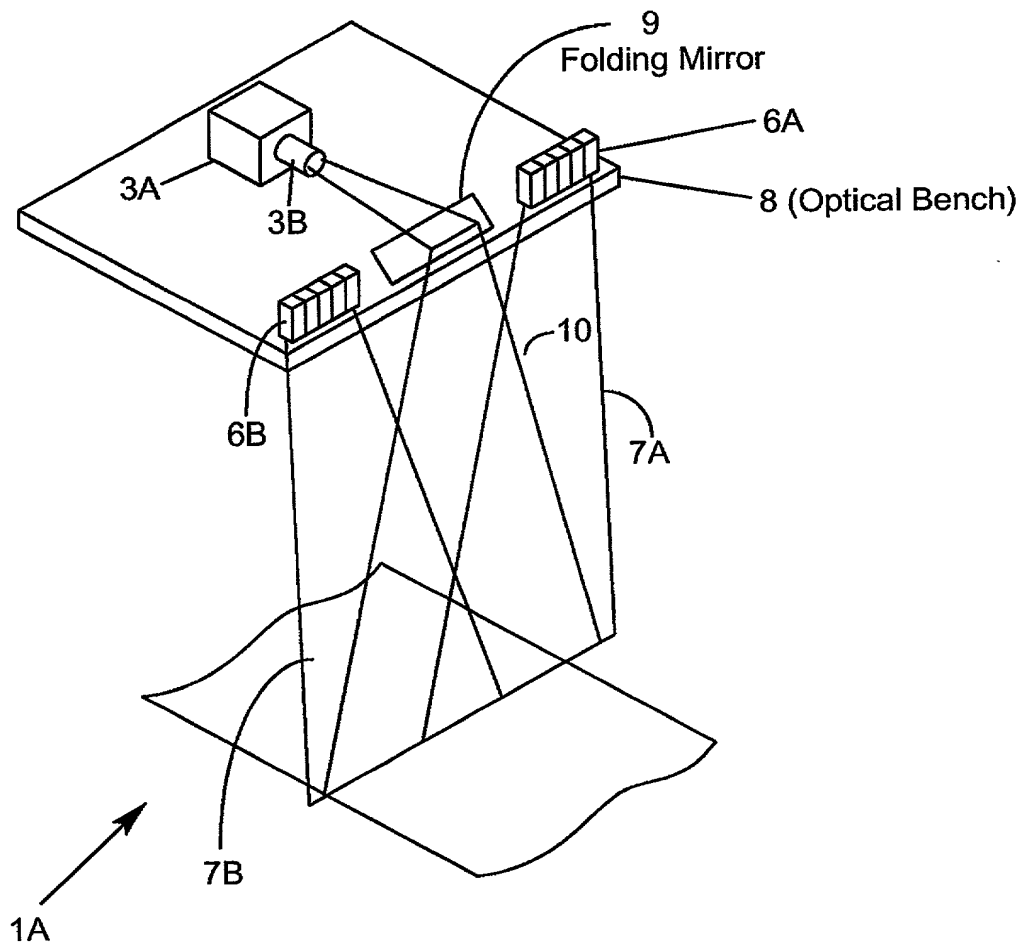


FIG. 1B1

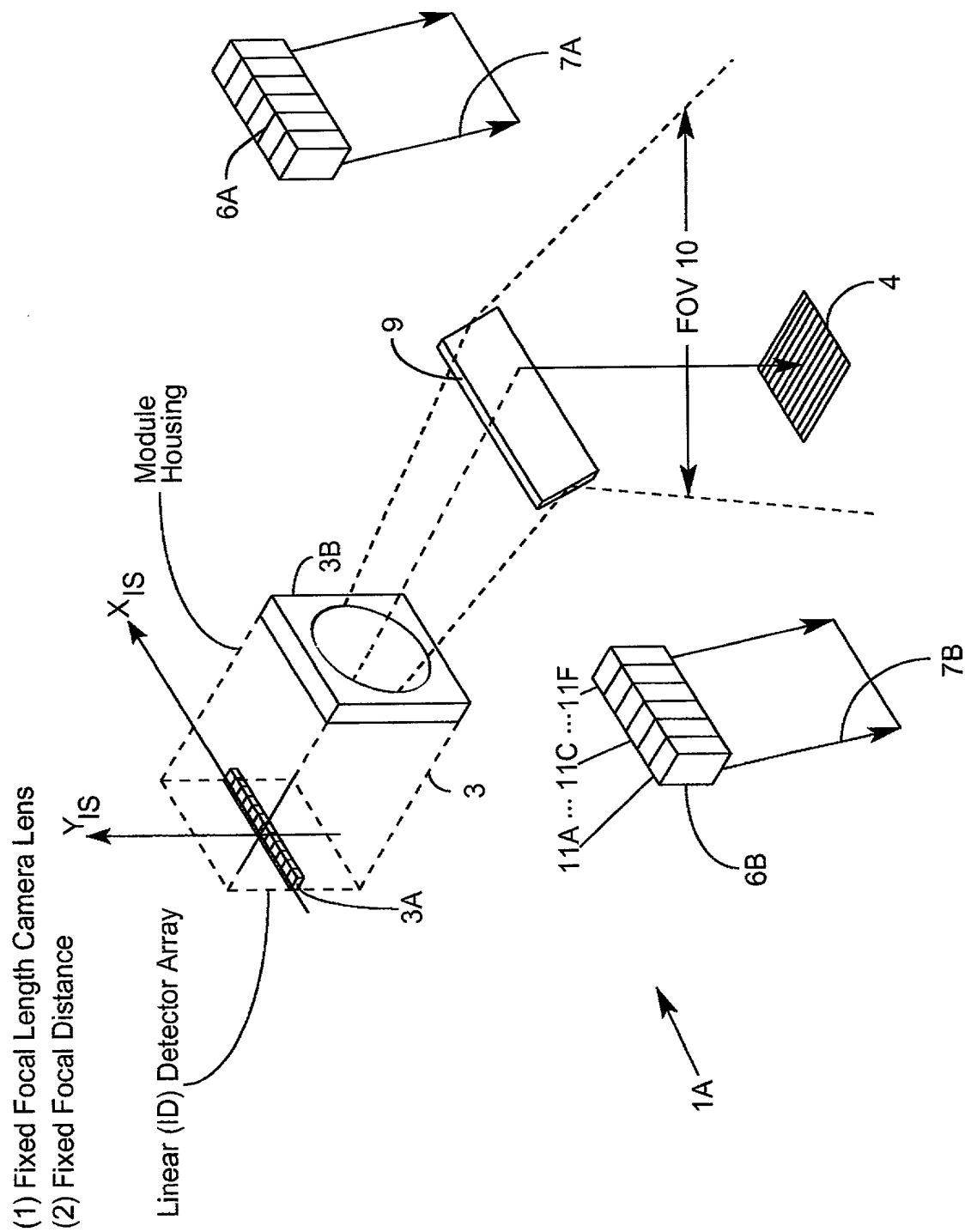


FIG. 1B2

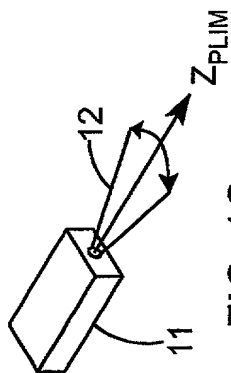


FIG. 1C

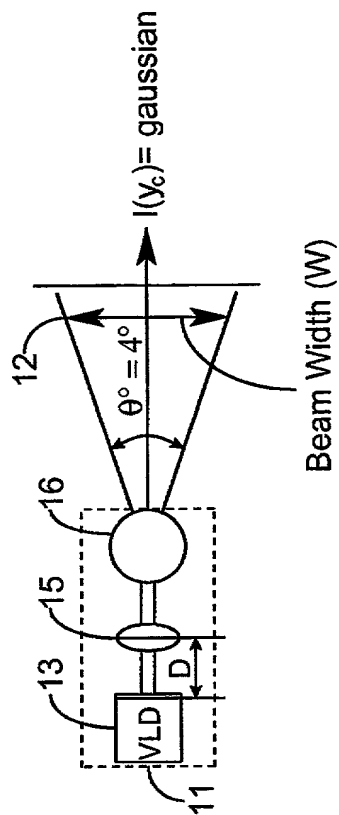


FIG. 1E1

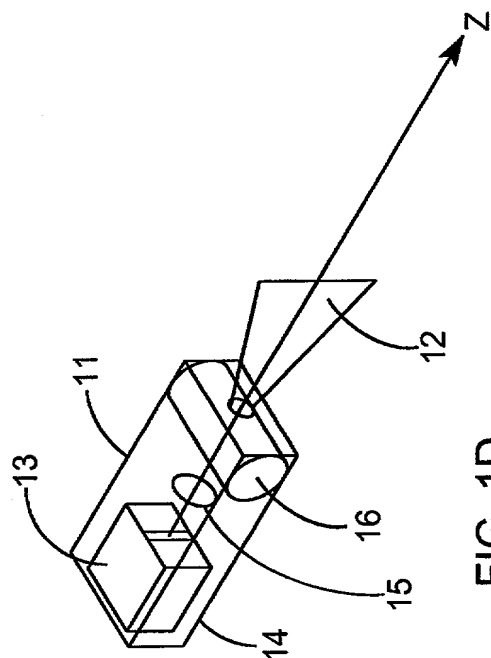


FIG. 1D

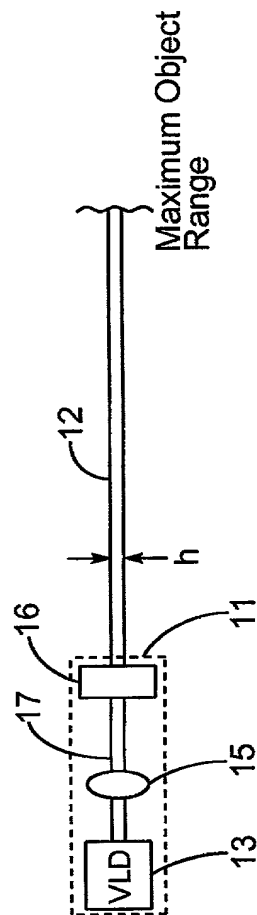
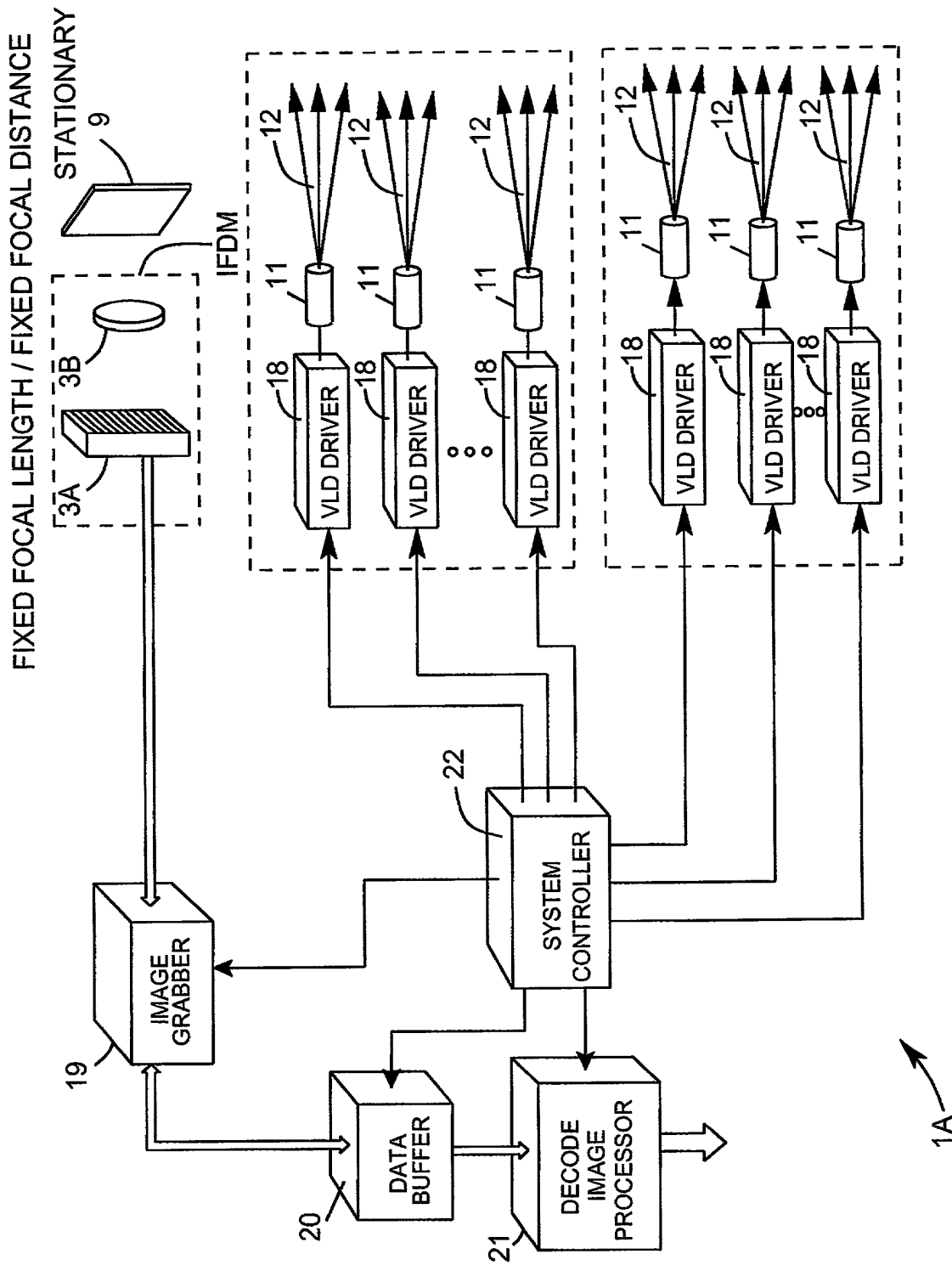


FIG. 1E2



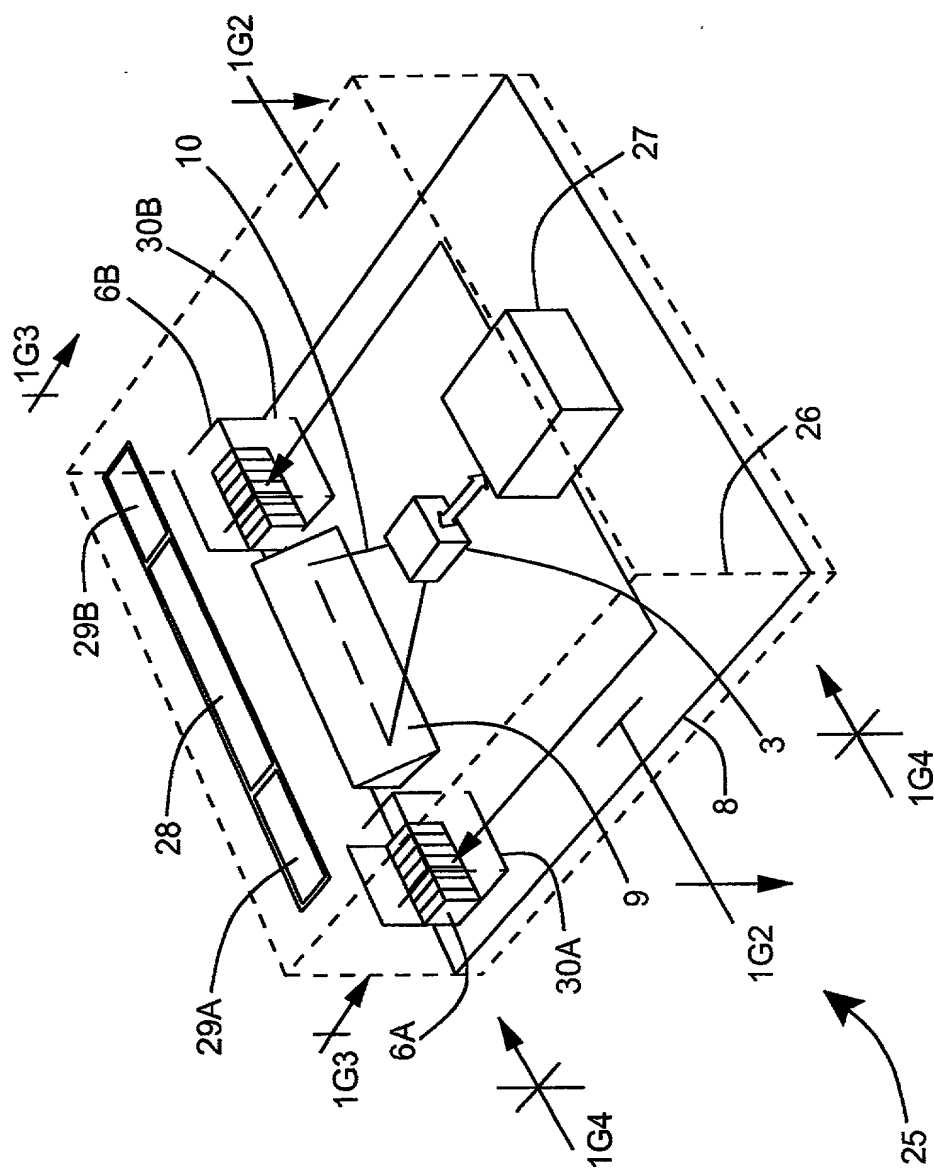


FIG. 1G1

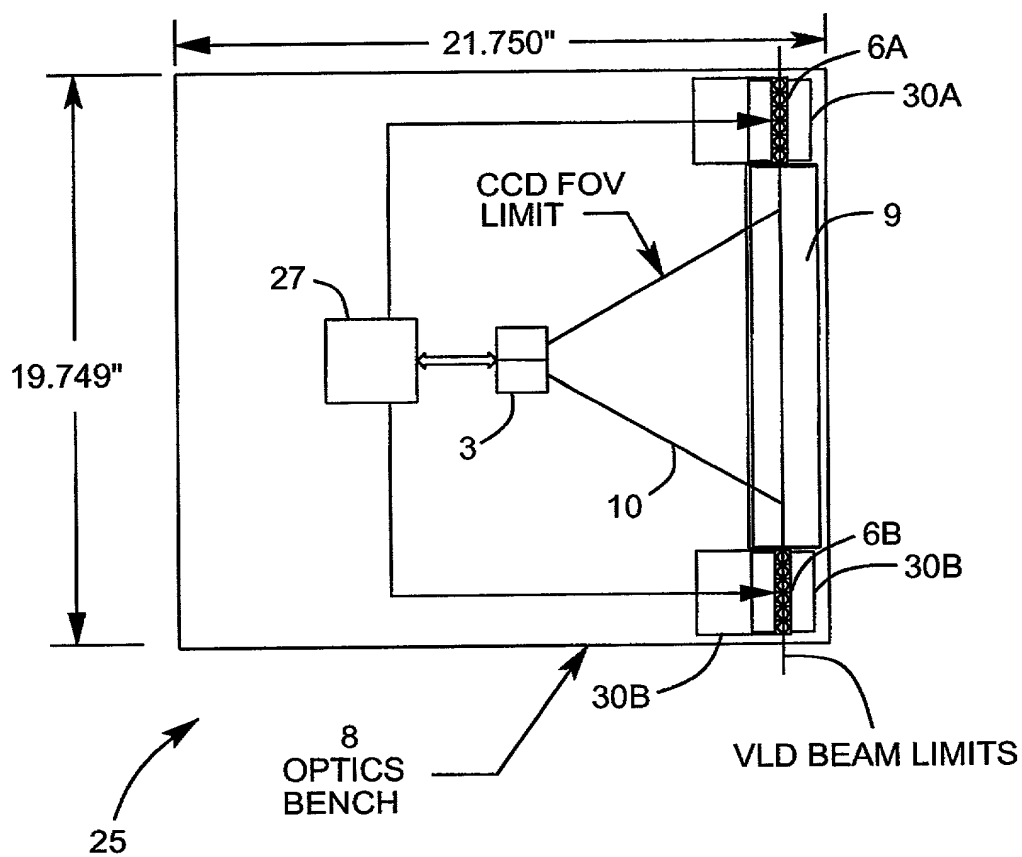


FIG. 1G2

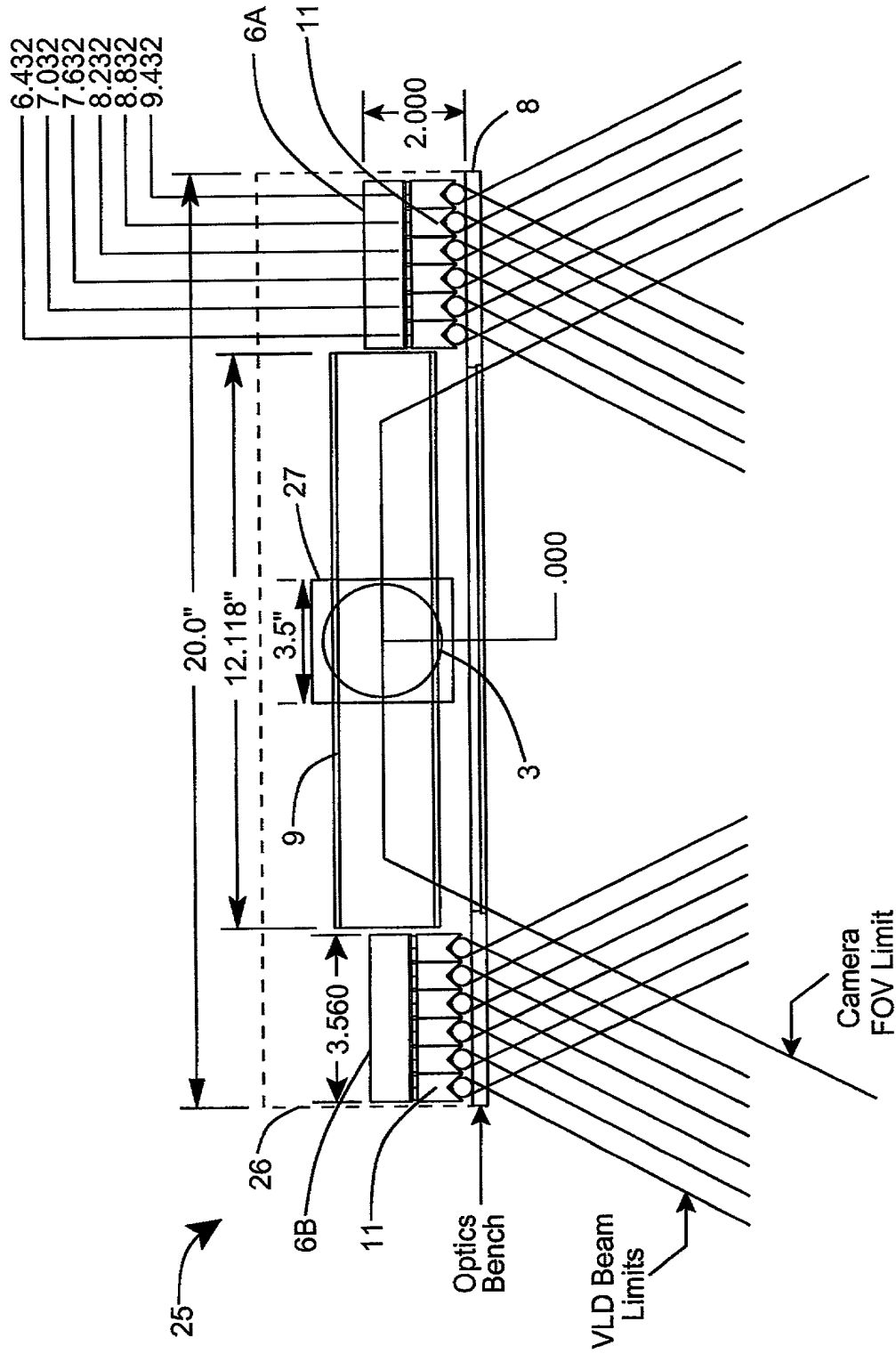


FIG. 1G3

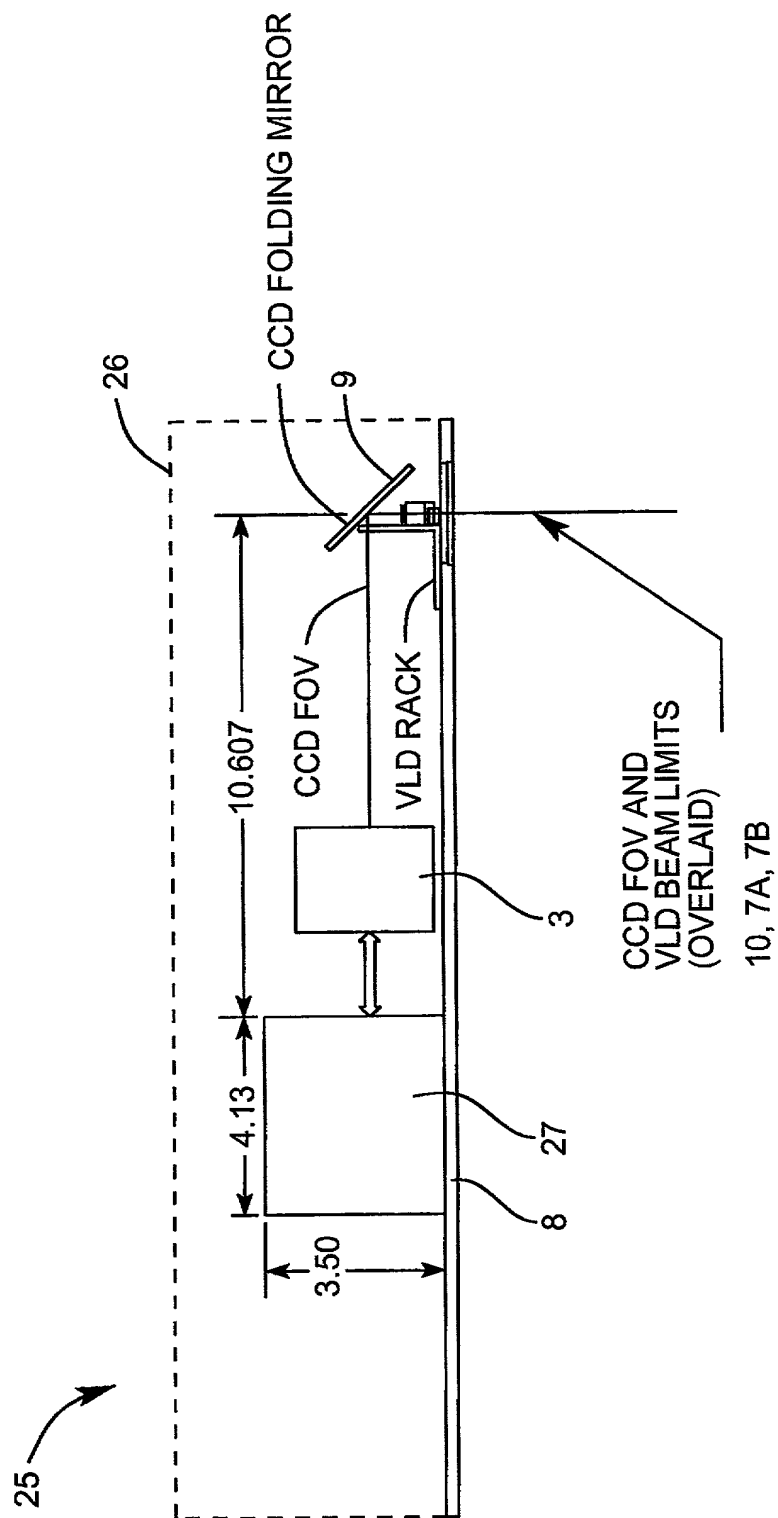


FIG. 1G4

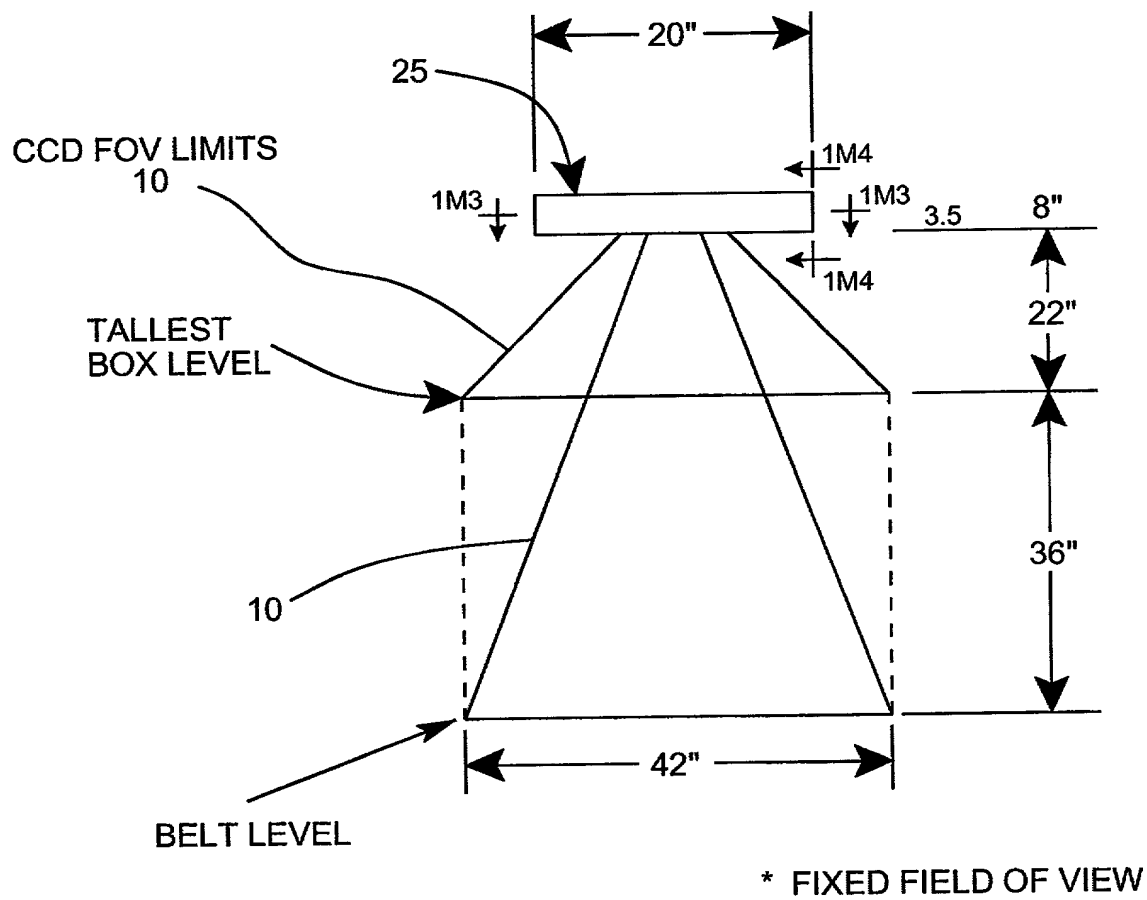


FIG. 1G5

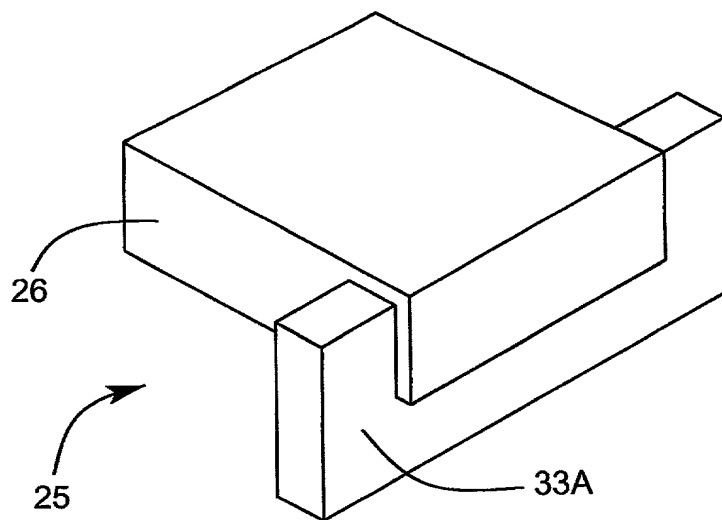


FIG. 1G6

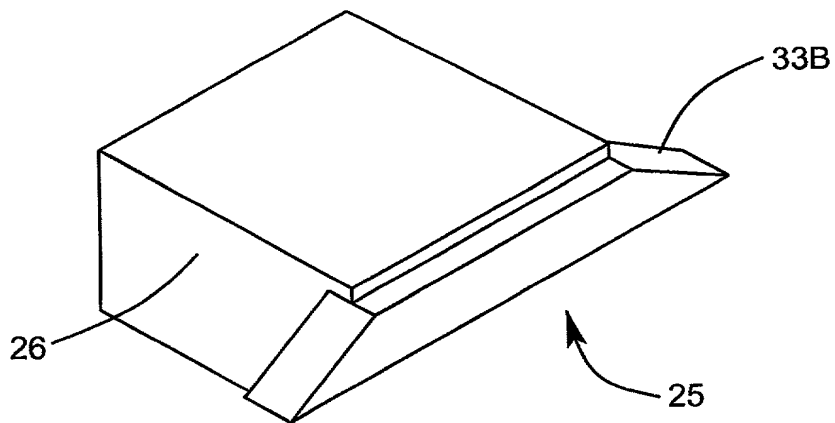


FIG. 1G7

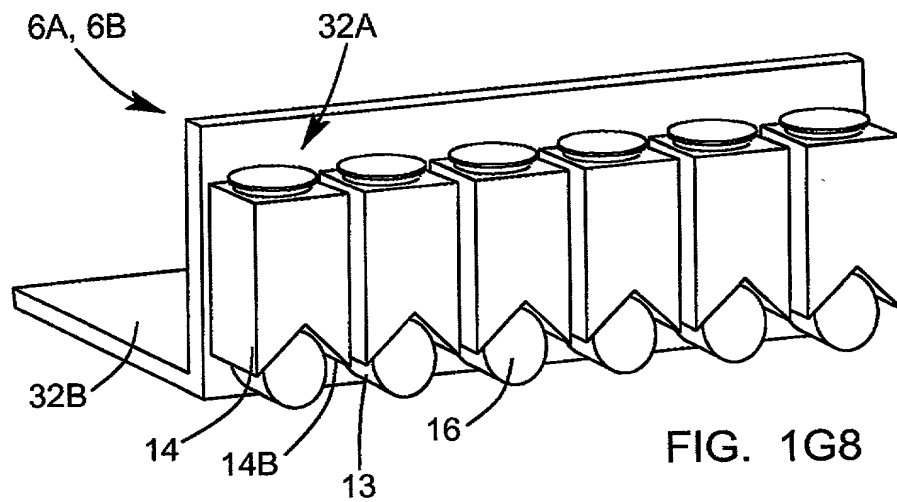


FIG. 1G8

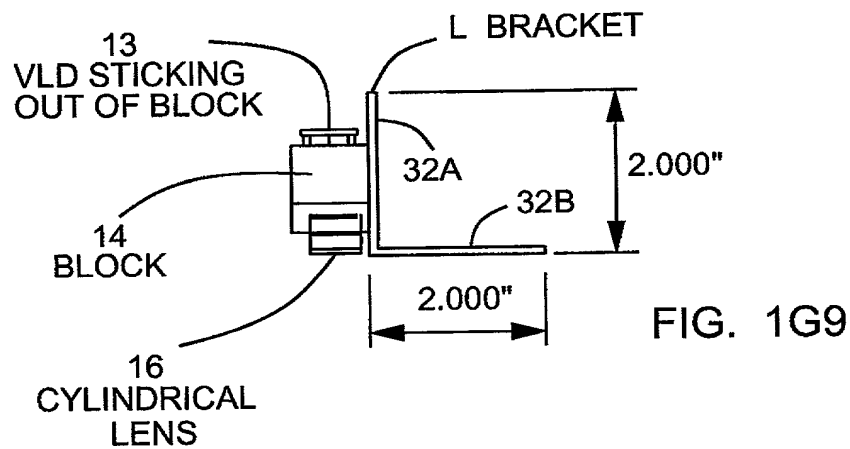


FIG. 1G9

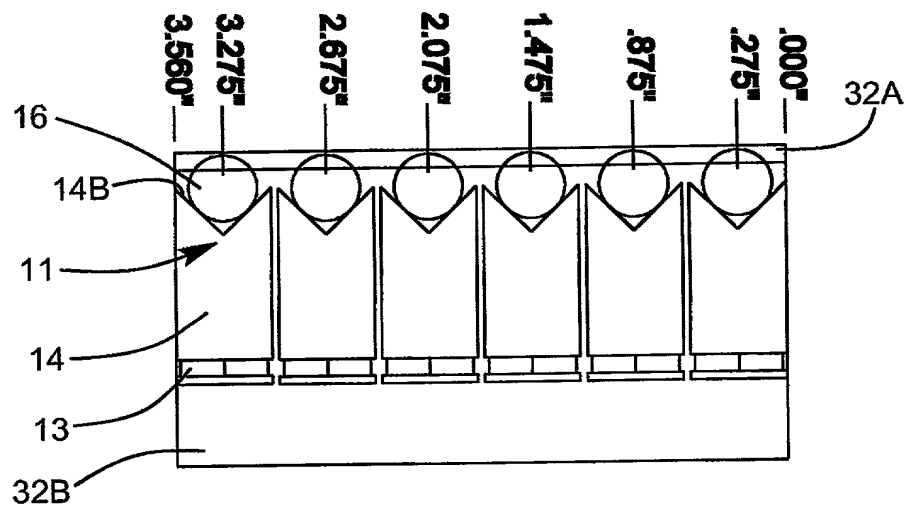


FIG. 1G10

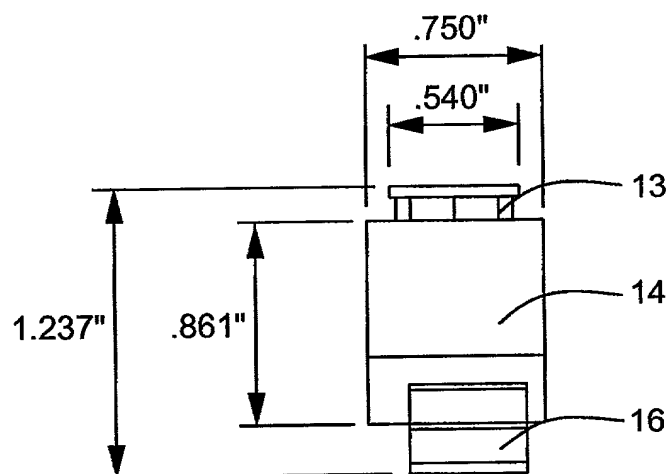


FIG. 1G11

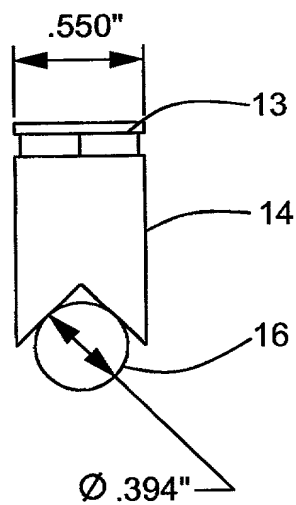


FIG. 1G12

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R<0.5% (760-800nm)
over zone Ø4.3

50/5x0.063;G1x0.4;C1x1.6

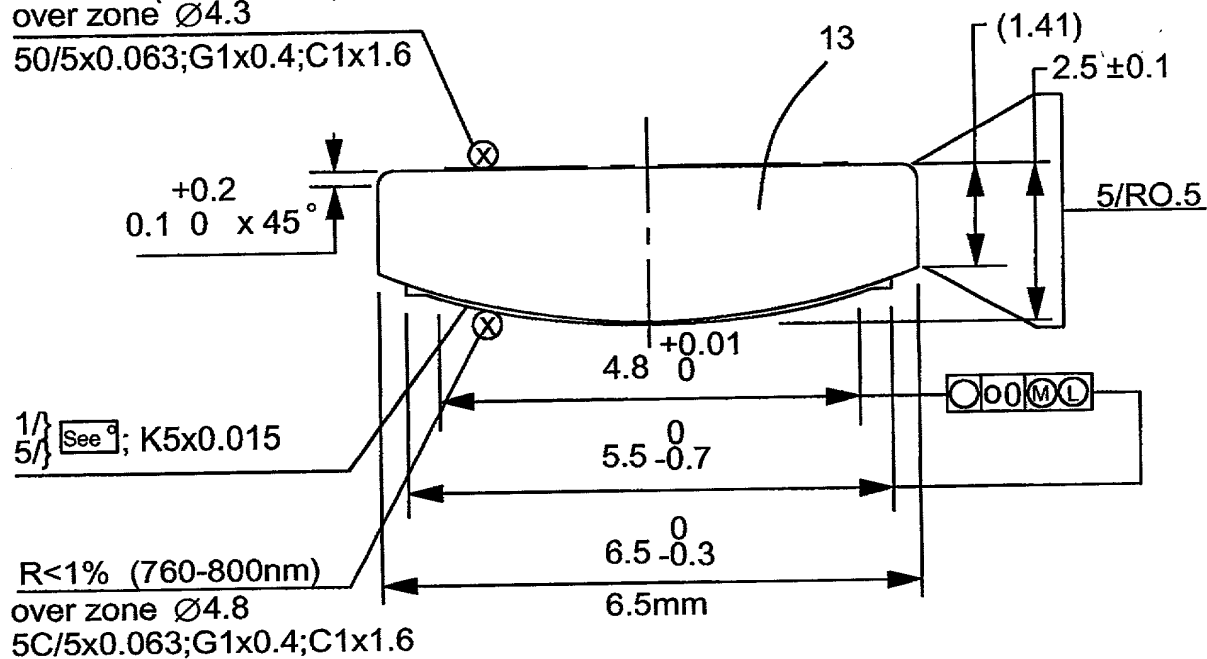


FIG. 1H1

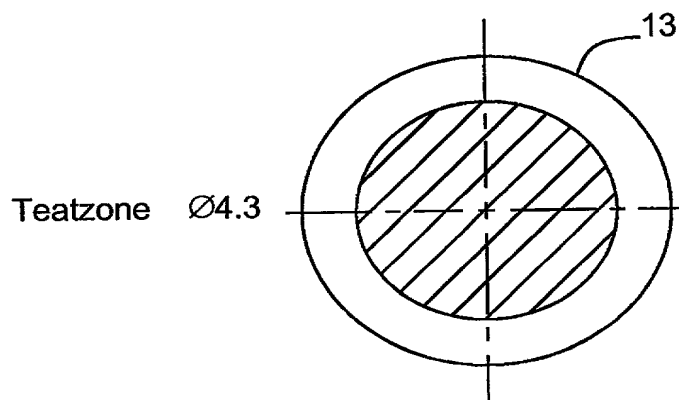


FIG. 1H2

FIG. 112

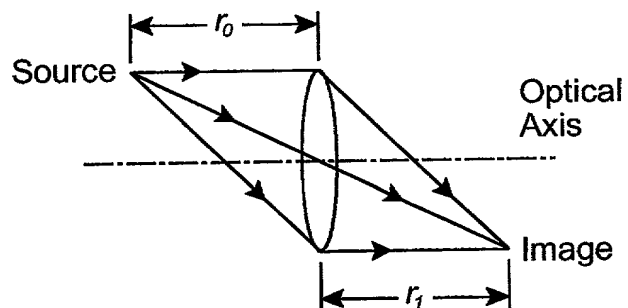


FIG. 1J1

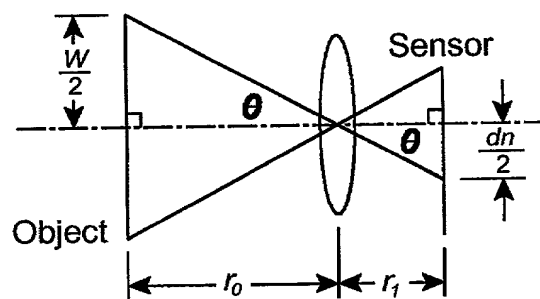


FIG. 1J2

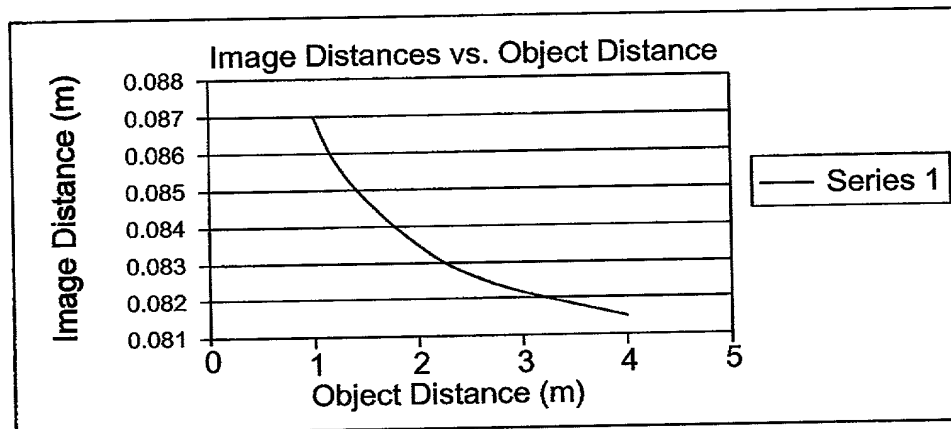


FIG. 1J3

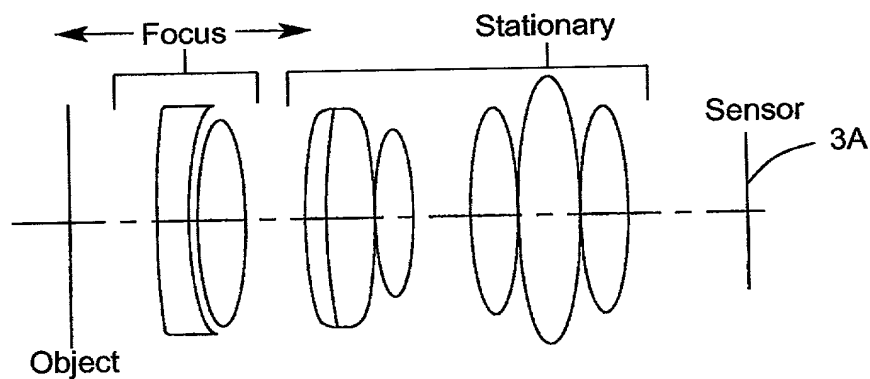


FIG. 1J4

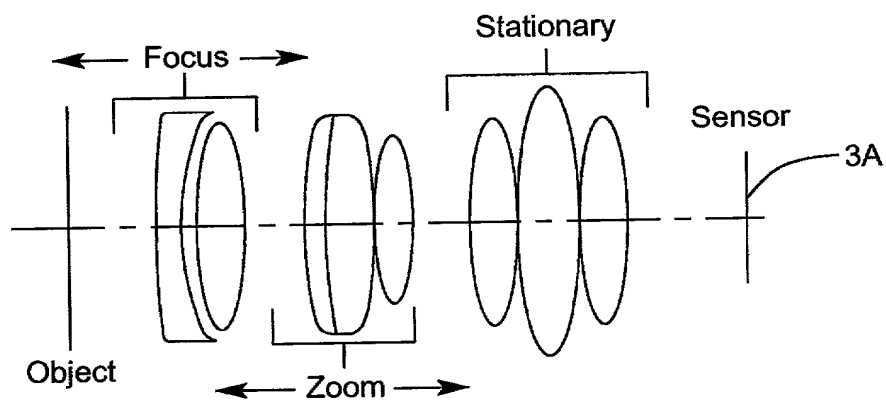


FIG. 1J5

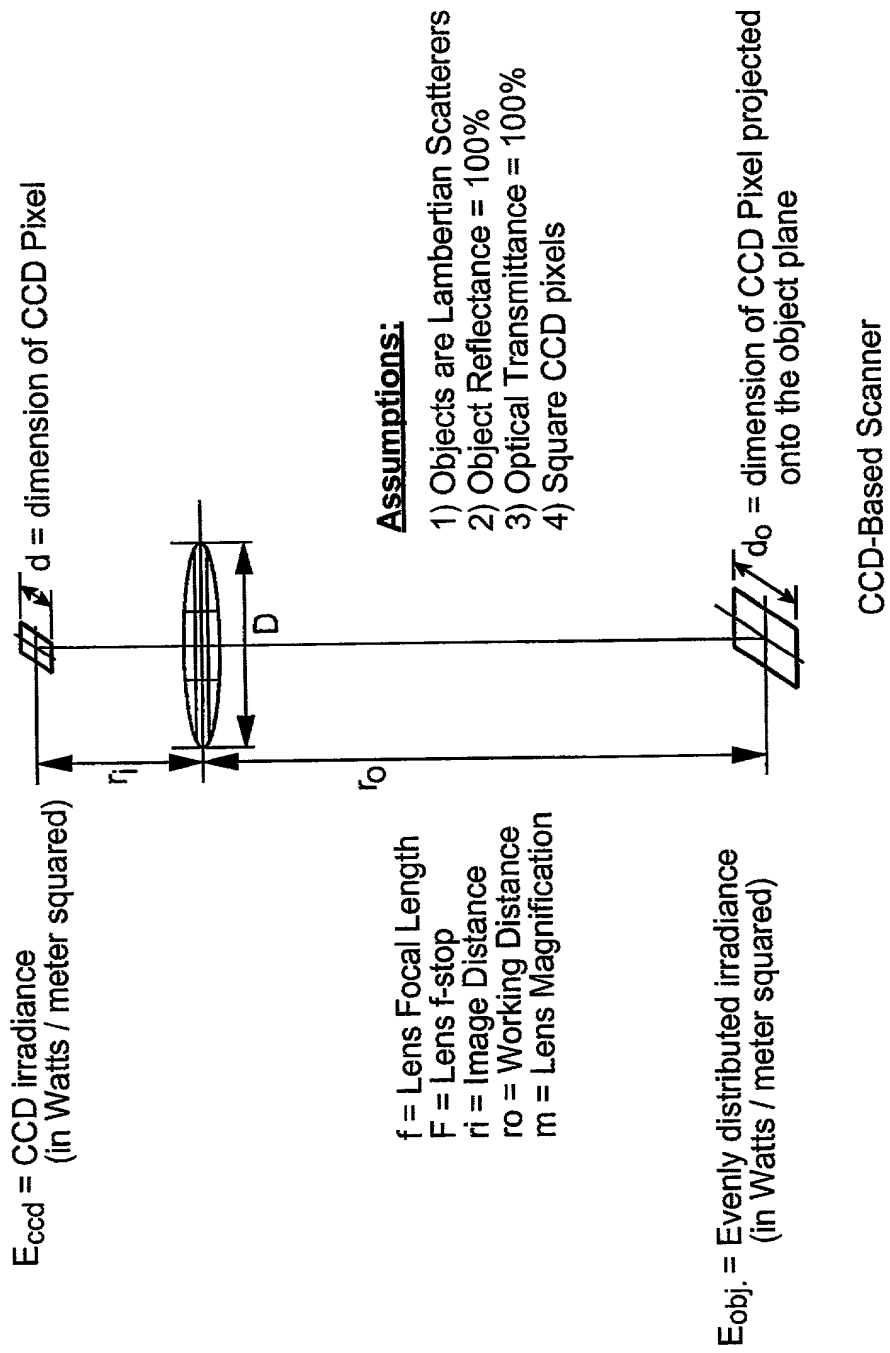


FIG. 1J6

Fixed Focal Length

Lens Cases

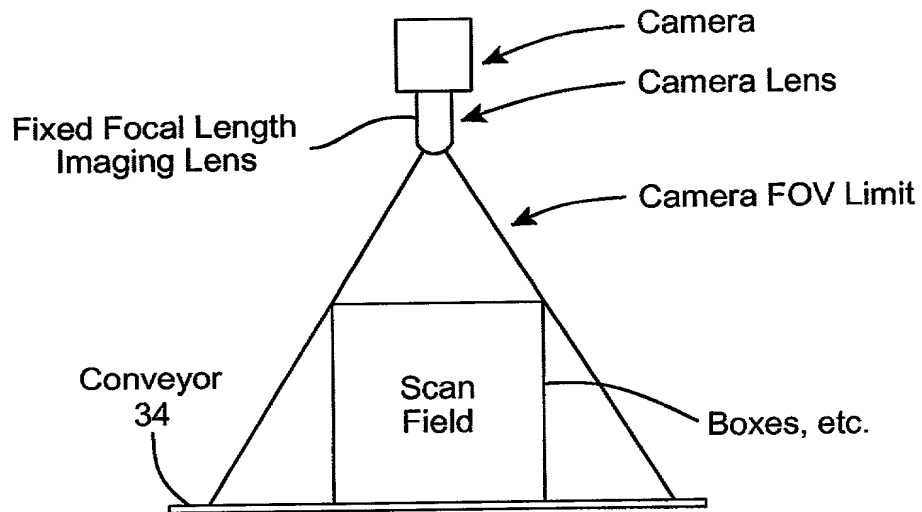


FIG. 1K1

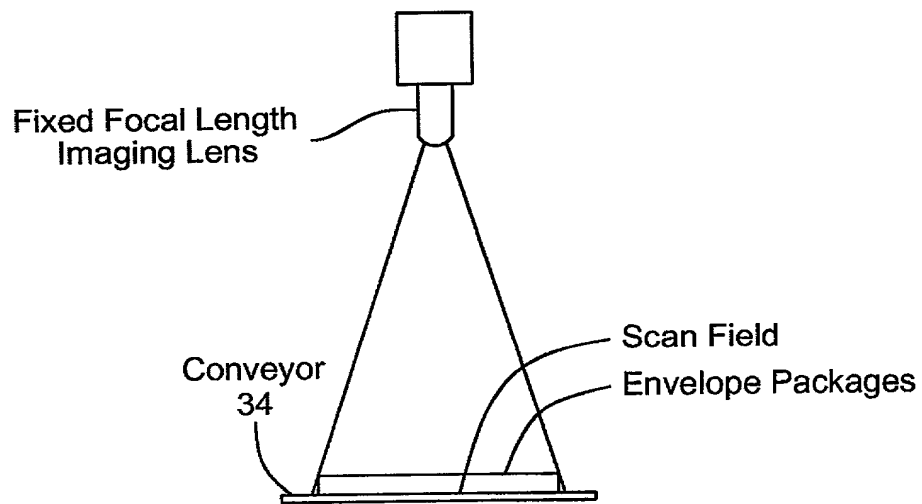


FIG. 1K2

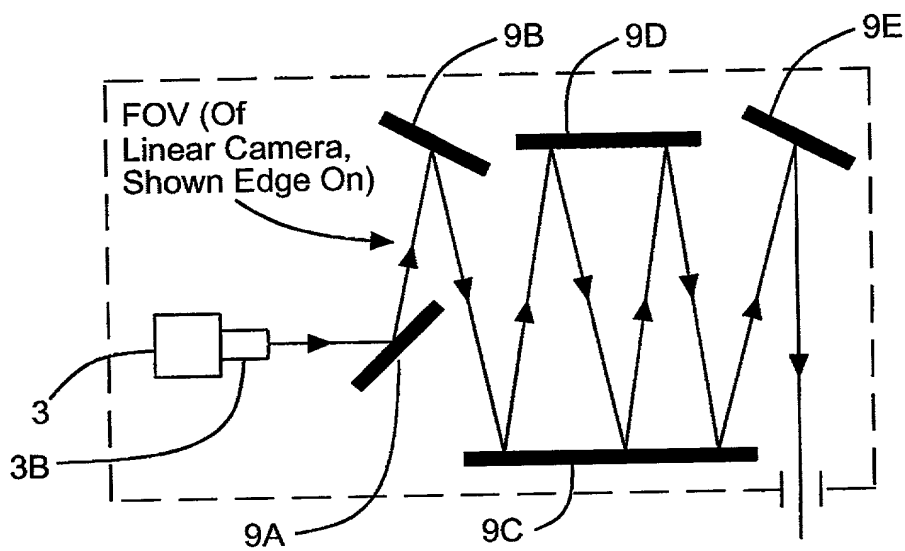


FIG. 1L1

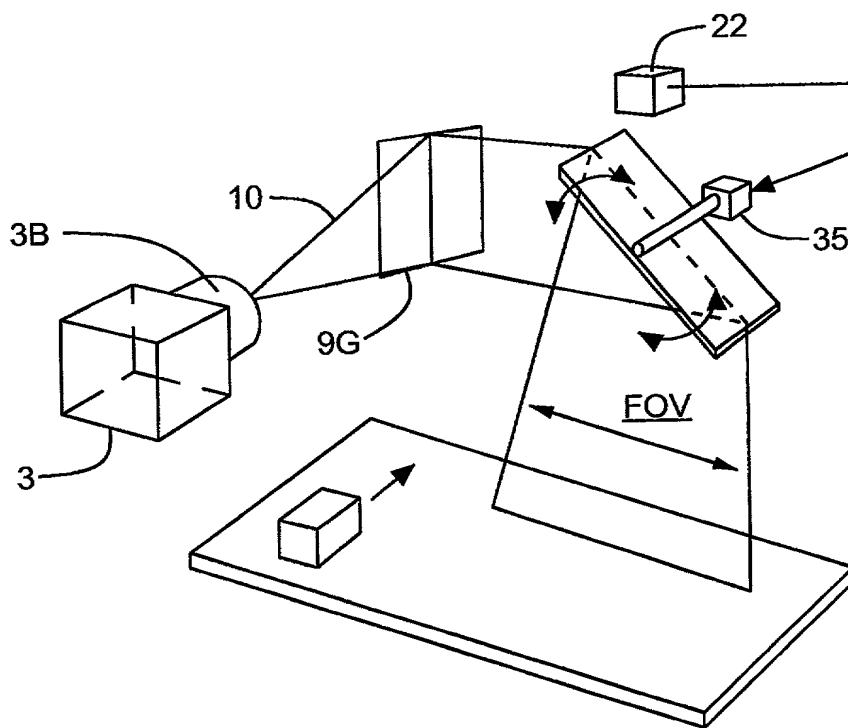


FIG. 1L2

Pixel Power Density vs. Object Distance (General Example)

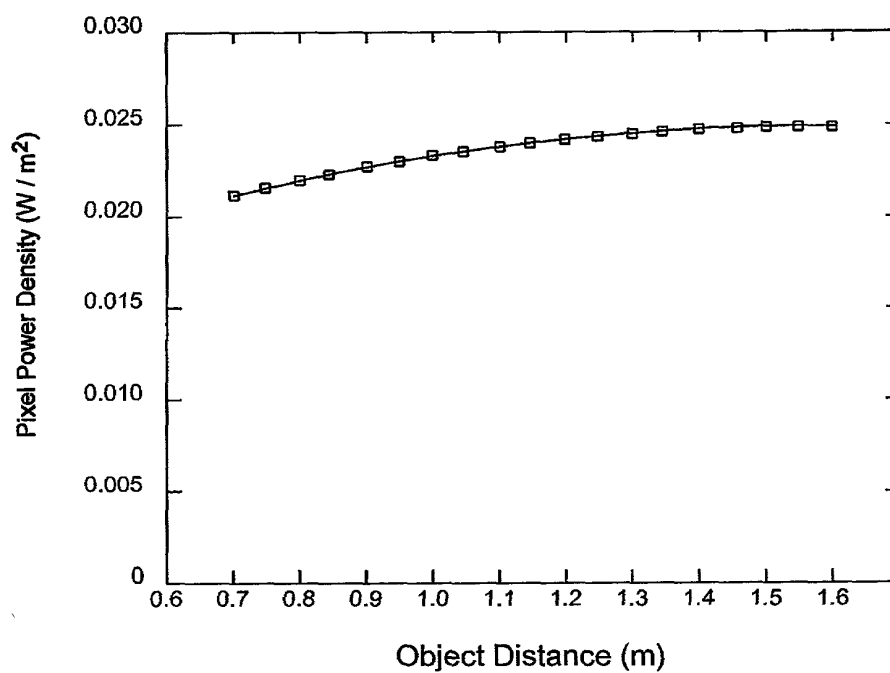


FIG. 1M1

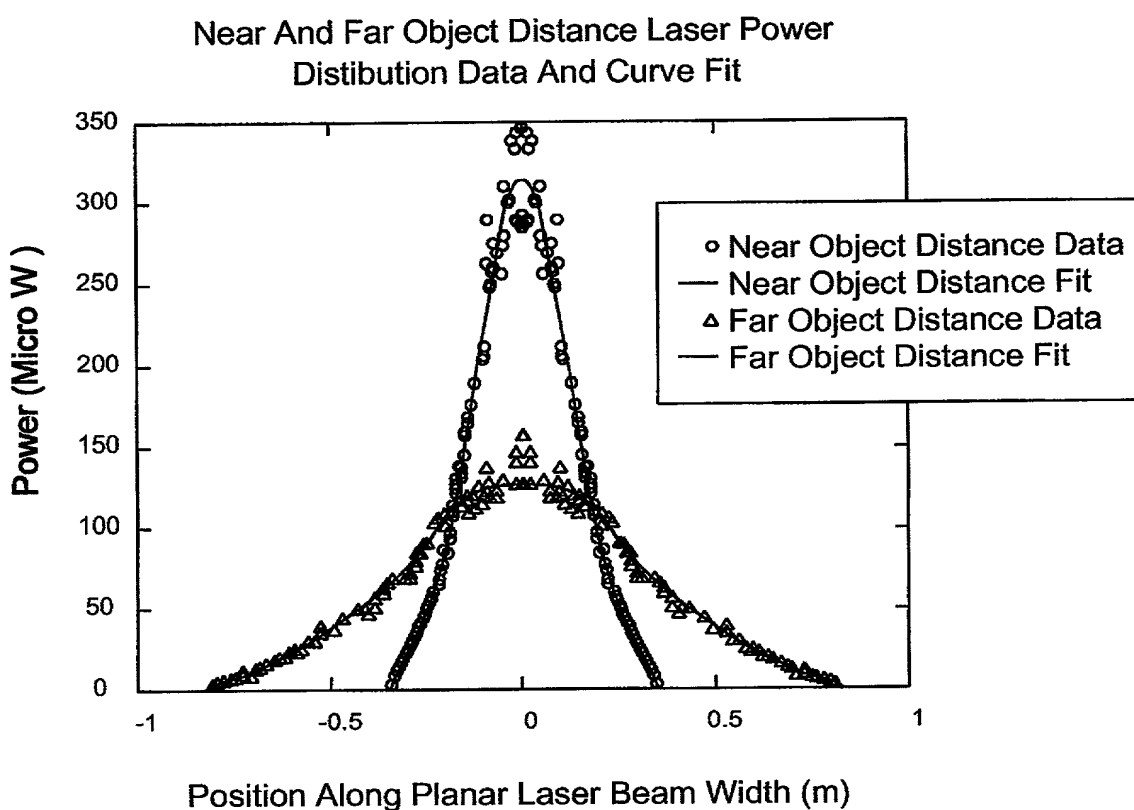


FIG. 1M2

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Planar Laser Beam Width vs. Object Distance

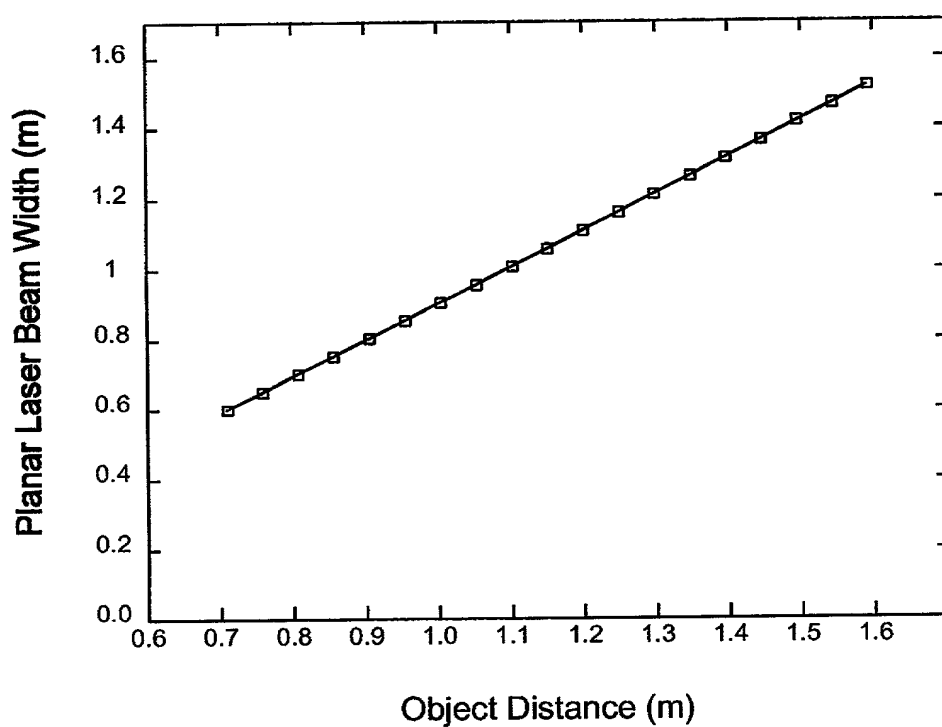


FIG. 1M3

Planar Laser Beam Height vs.
Object Distance (Far Object Distance Focus)

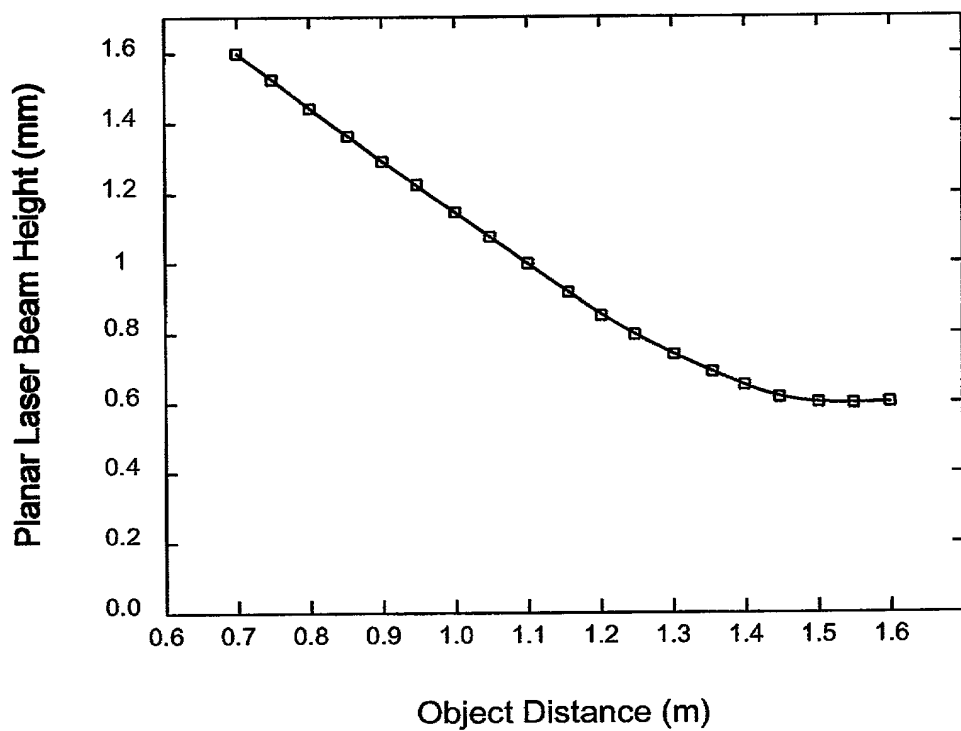


FIG. 1M4

Center Line Power Density vs. Object
Distance (Far Object Distance Focus)

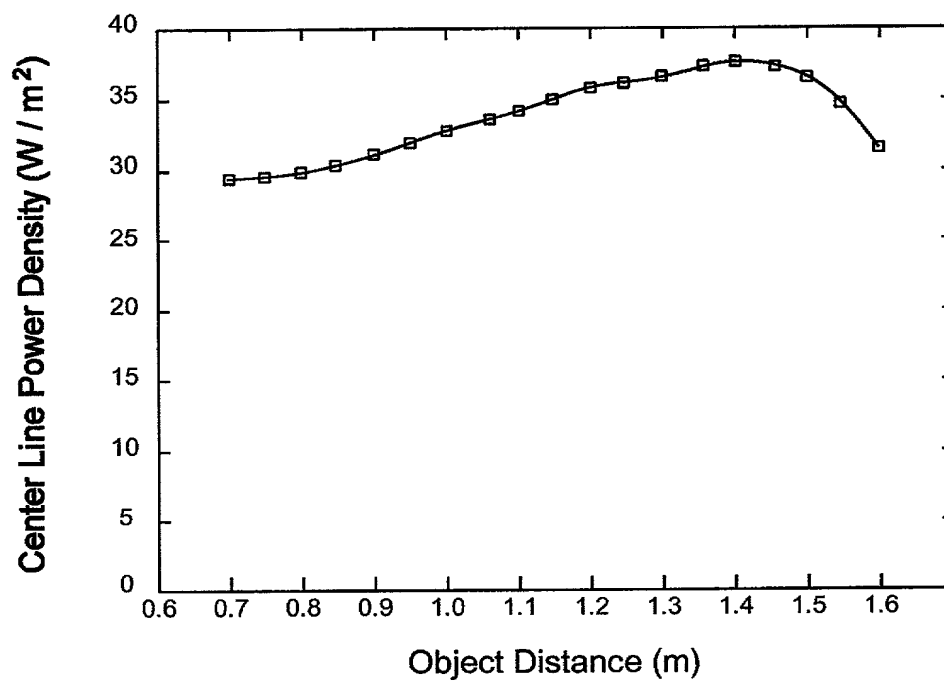


FIG. 1N

Pixel Power Densities vs. Object Distance

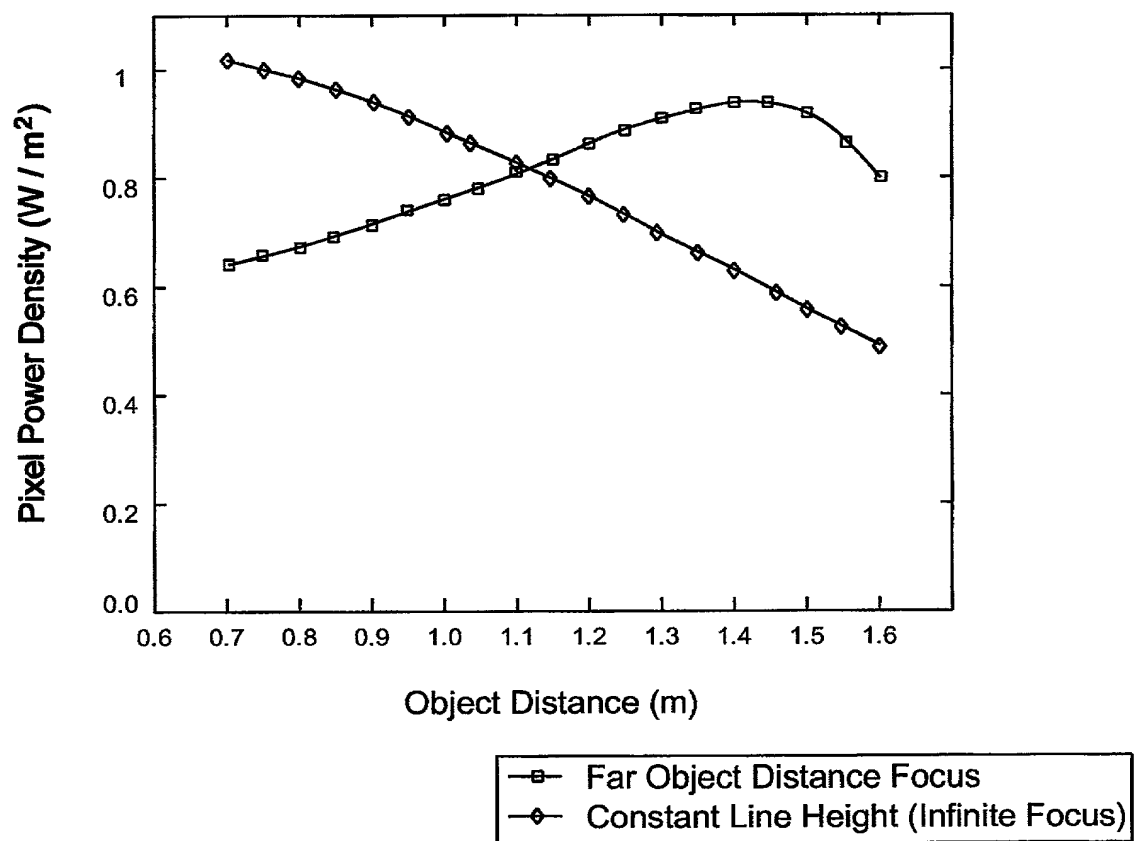
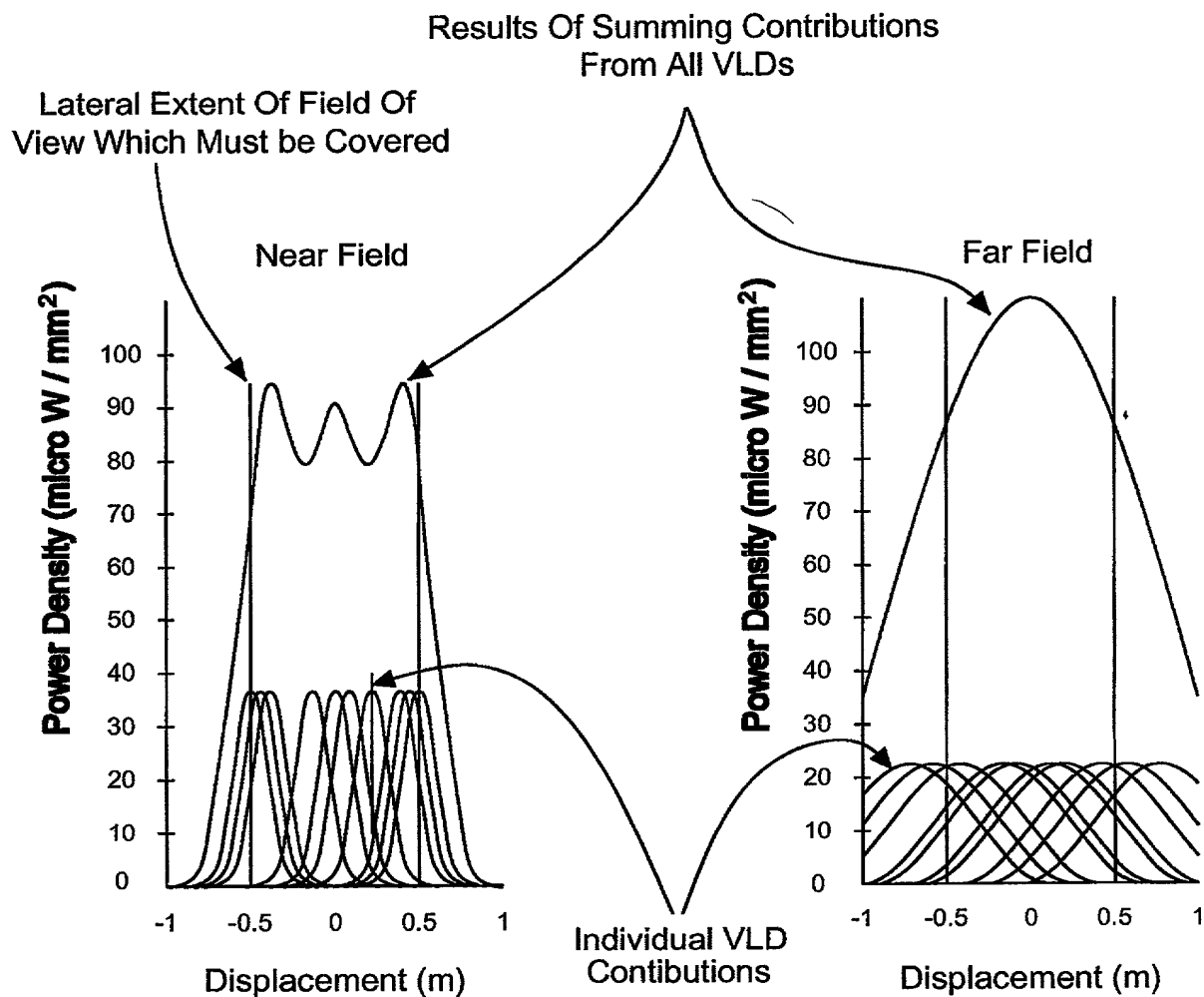
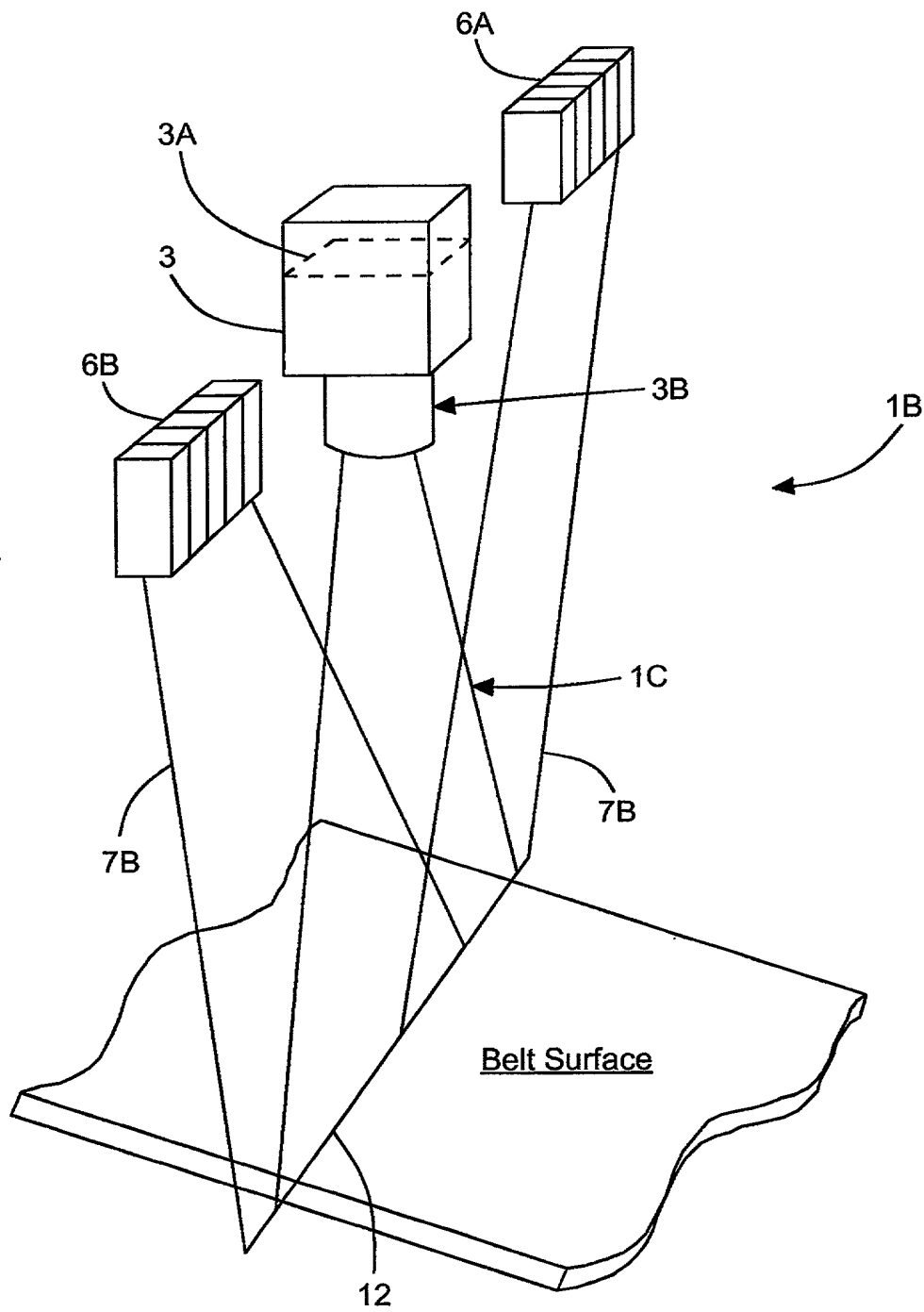


FIG. 10





FIXED FOCAL LENGTH / FIXED FOCAL DISTANCE

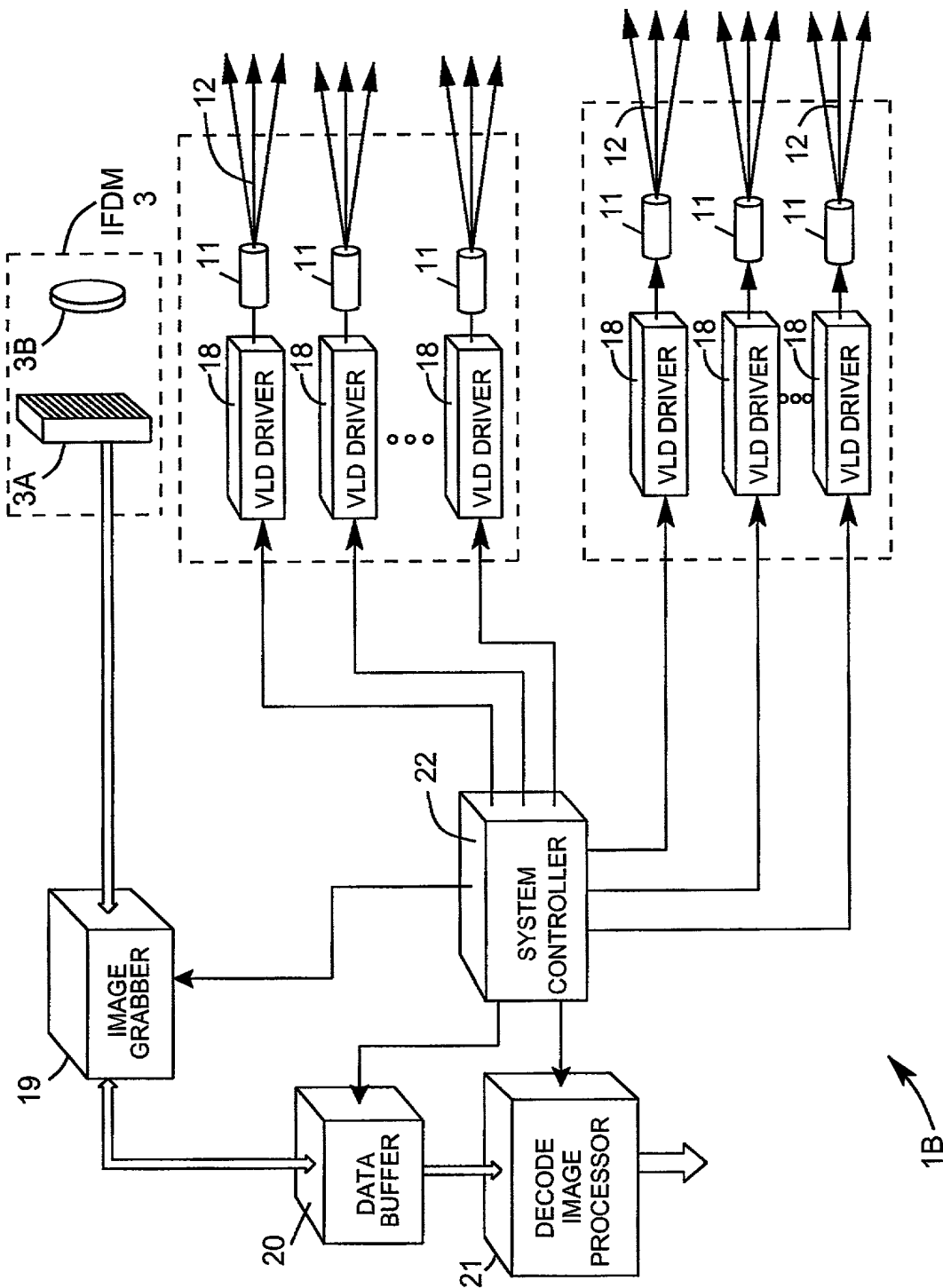


FIG. 1Q2

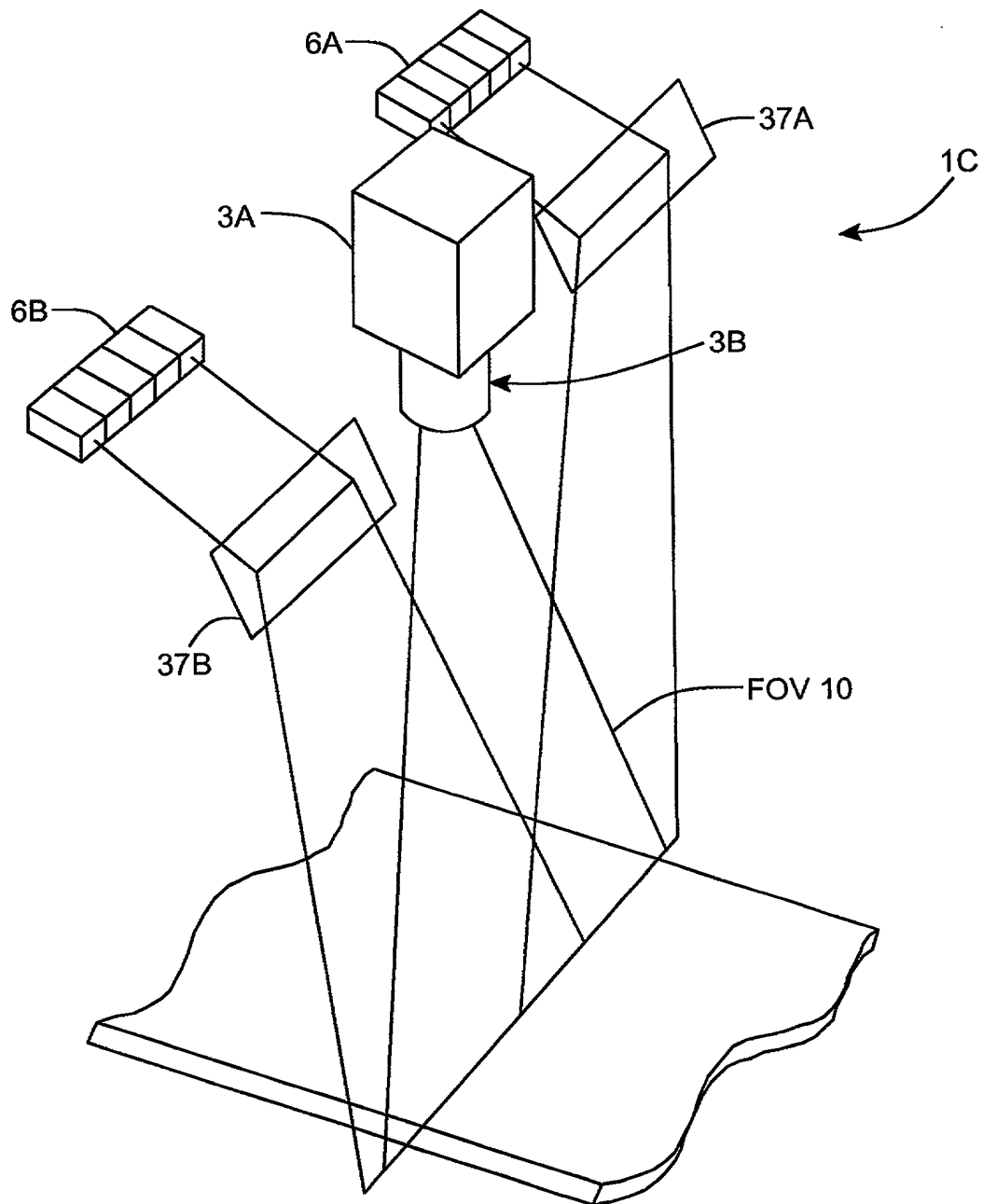
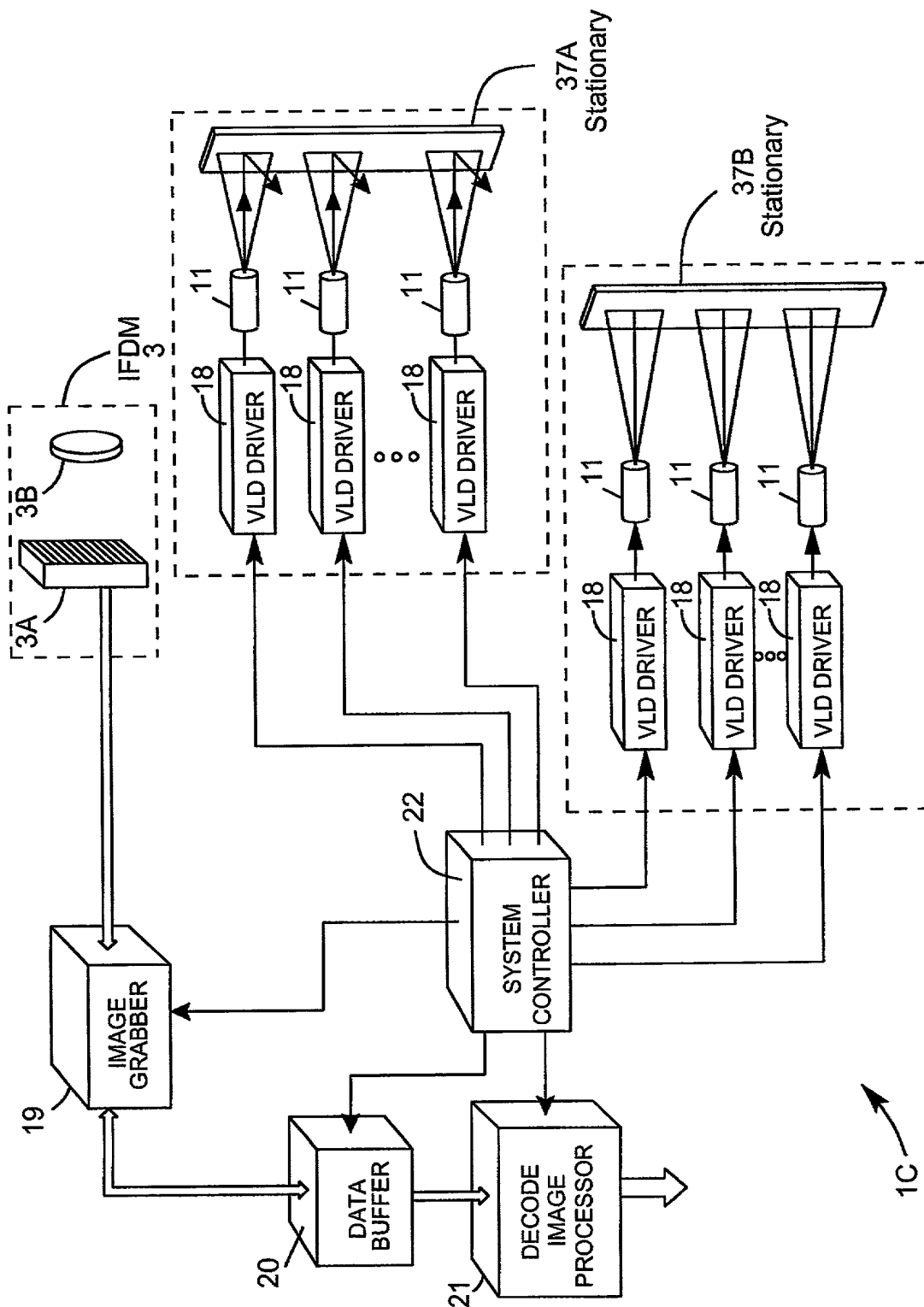


FIG. 1R1

FIXED FOCAL LENGTH / FIXED FOCAL DISTANCE



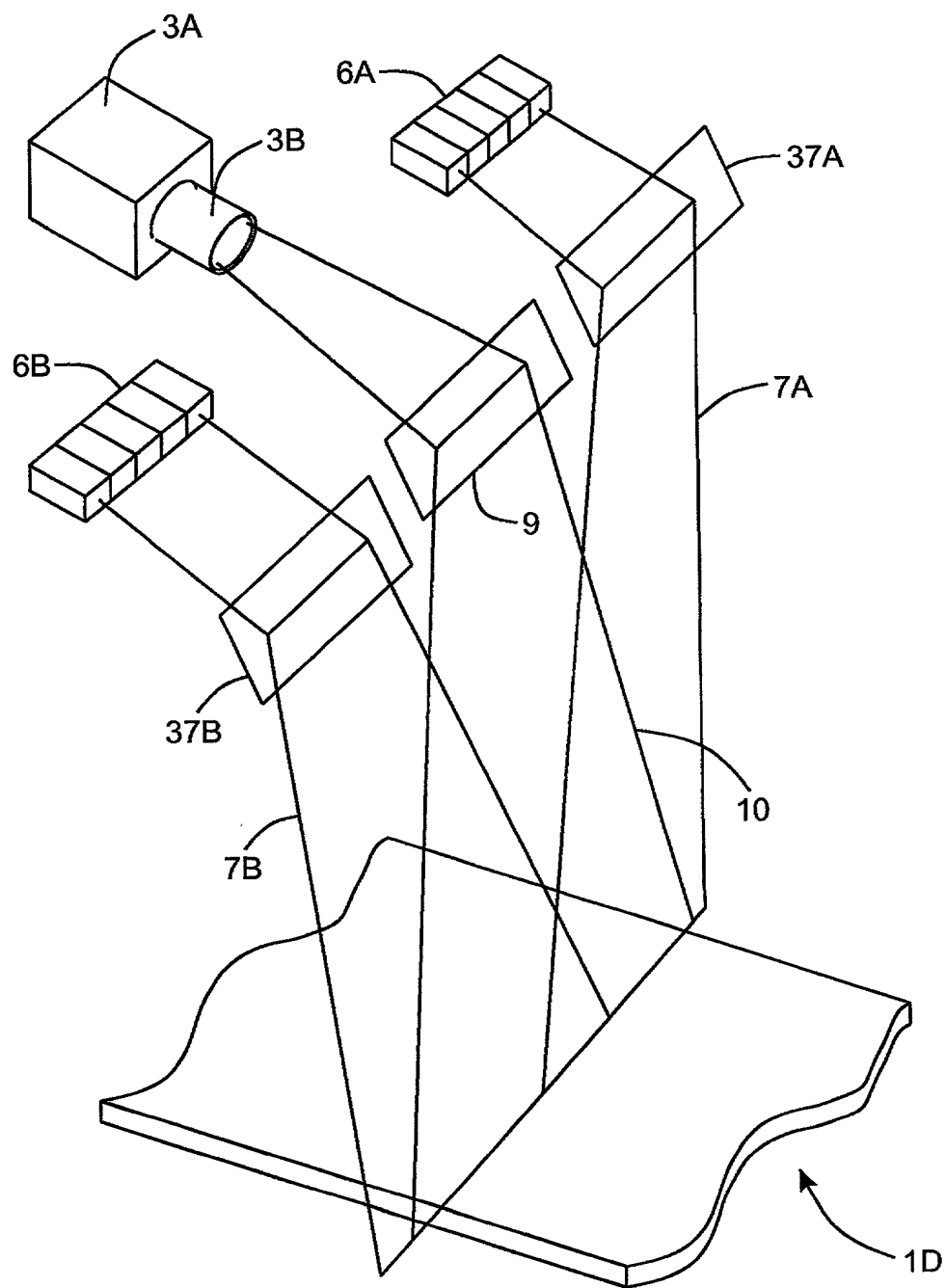


FIG. 1S1

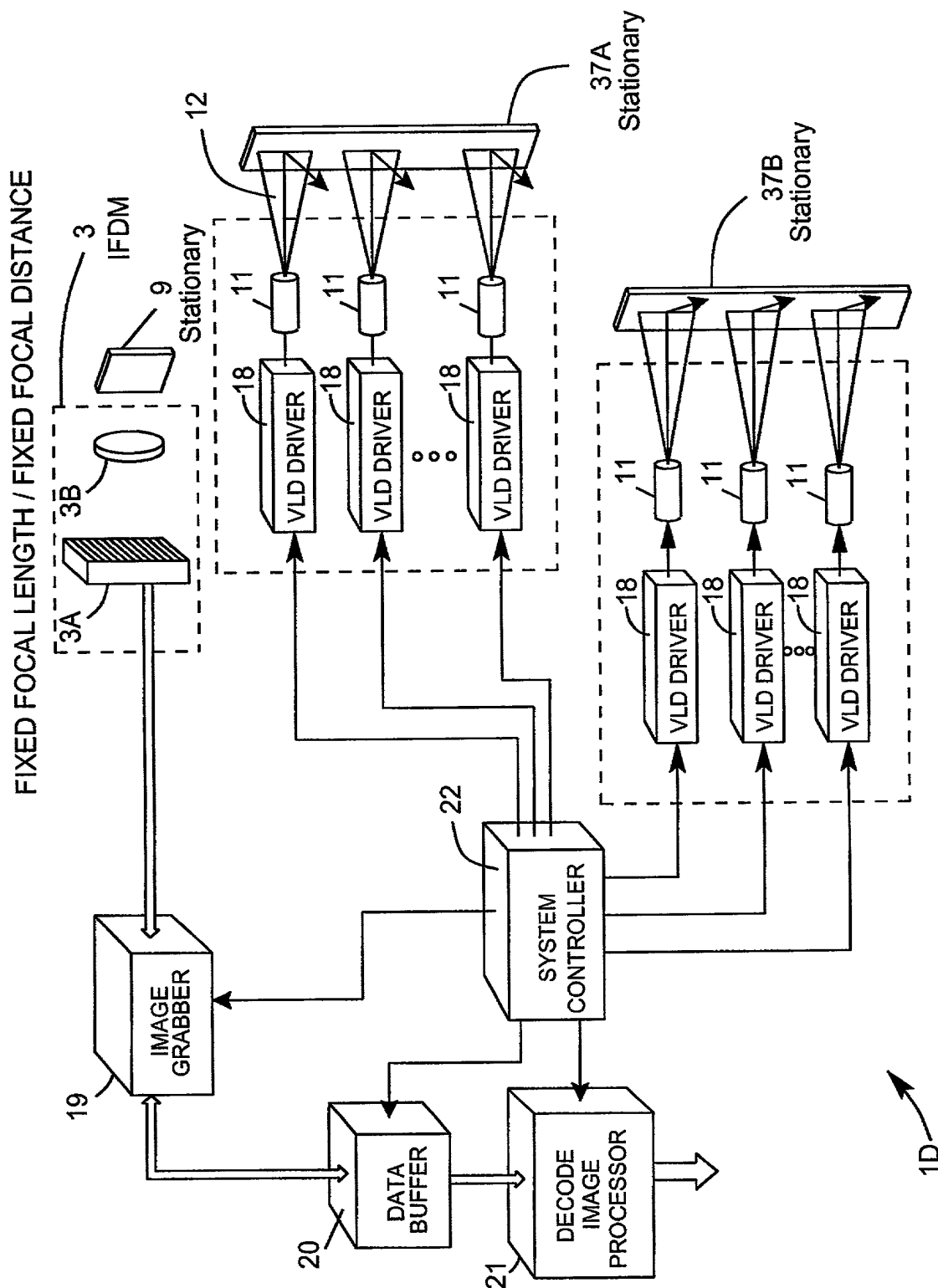


FIG. 1S2

20602075065001

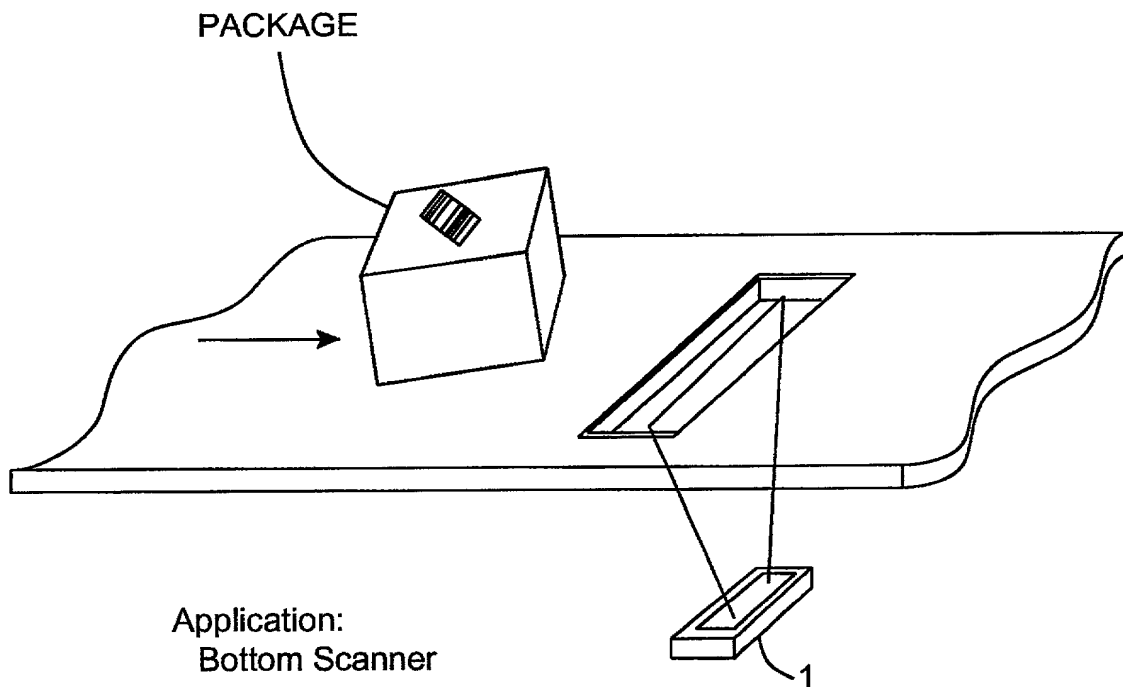
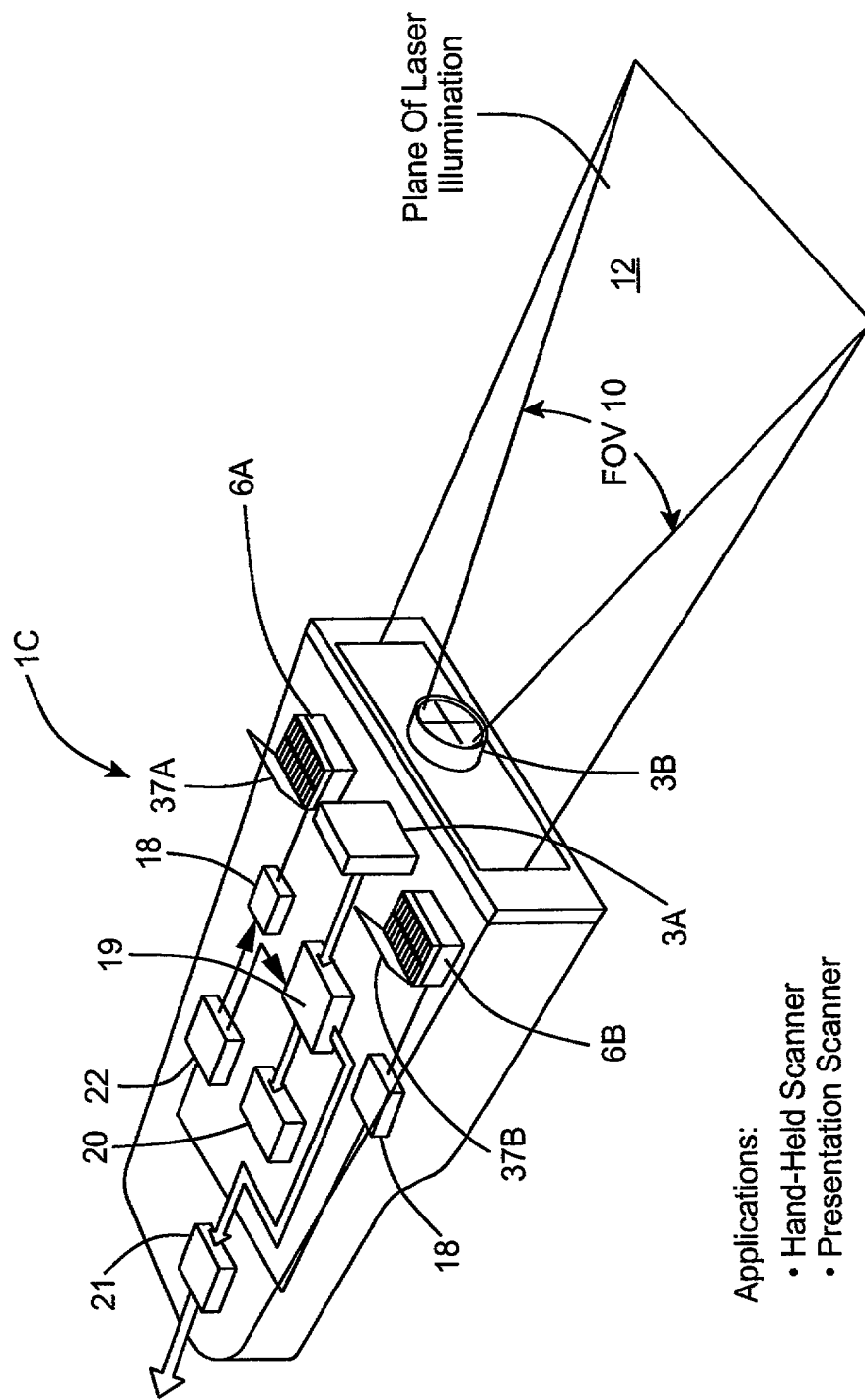


FIG. 1T



Applications:
 • Hand-Held Scanner
 • Presentation Scanner

FIG. 1U

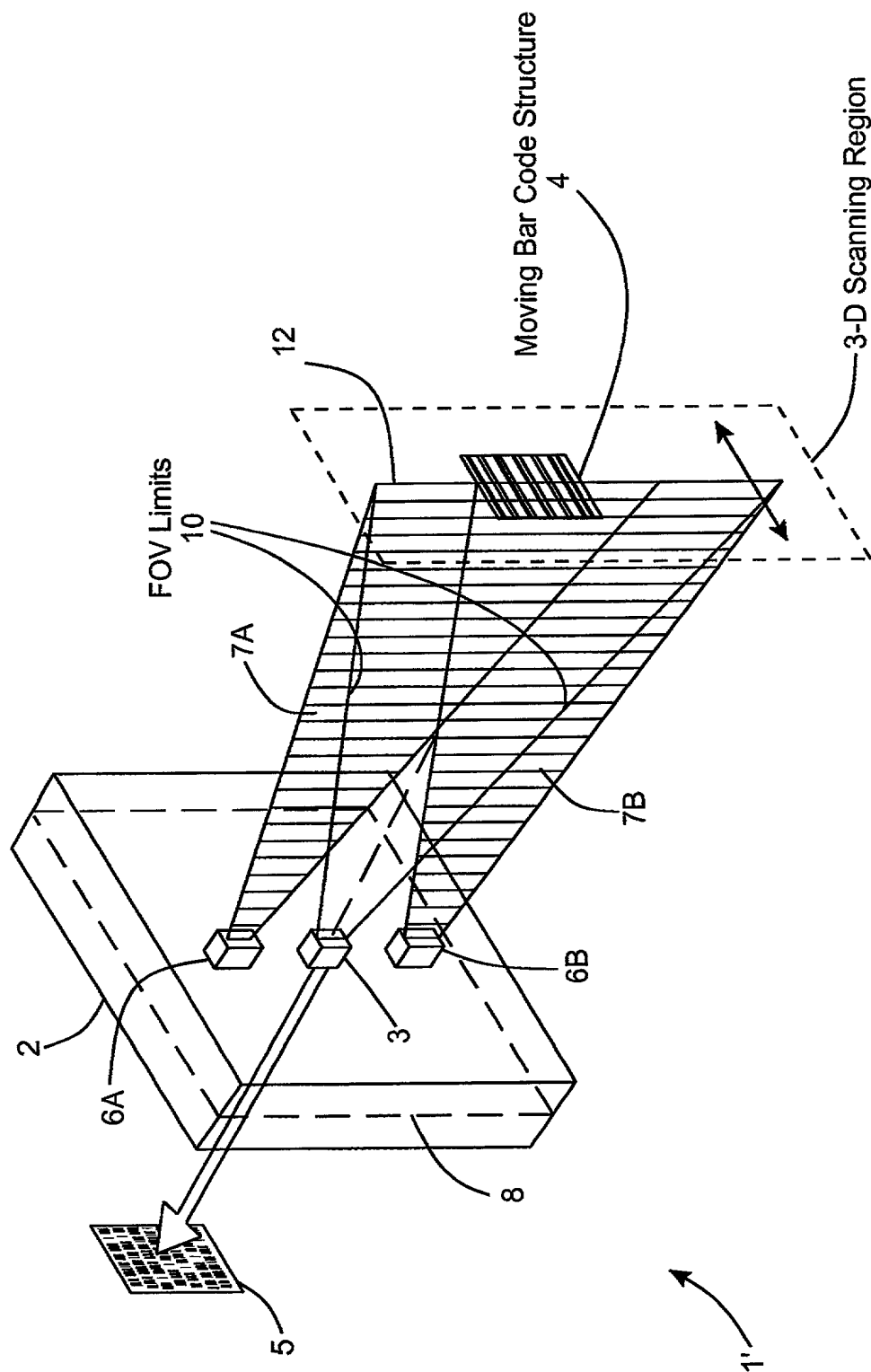


FIG. 1V1

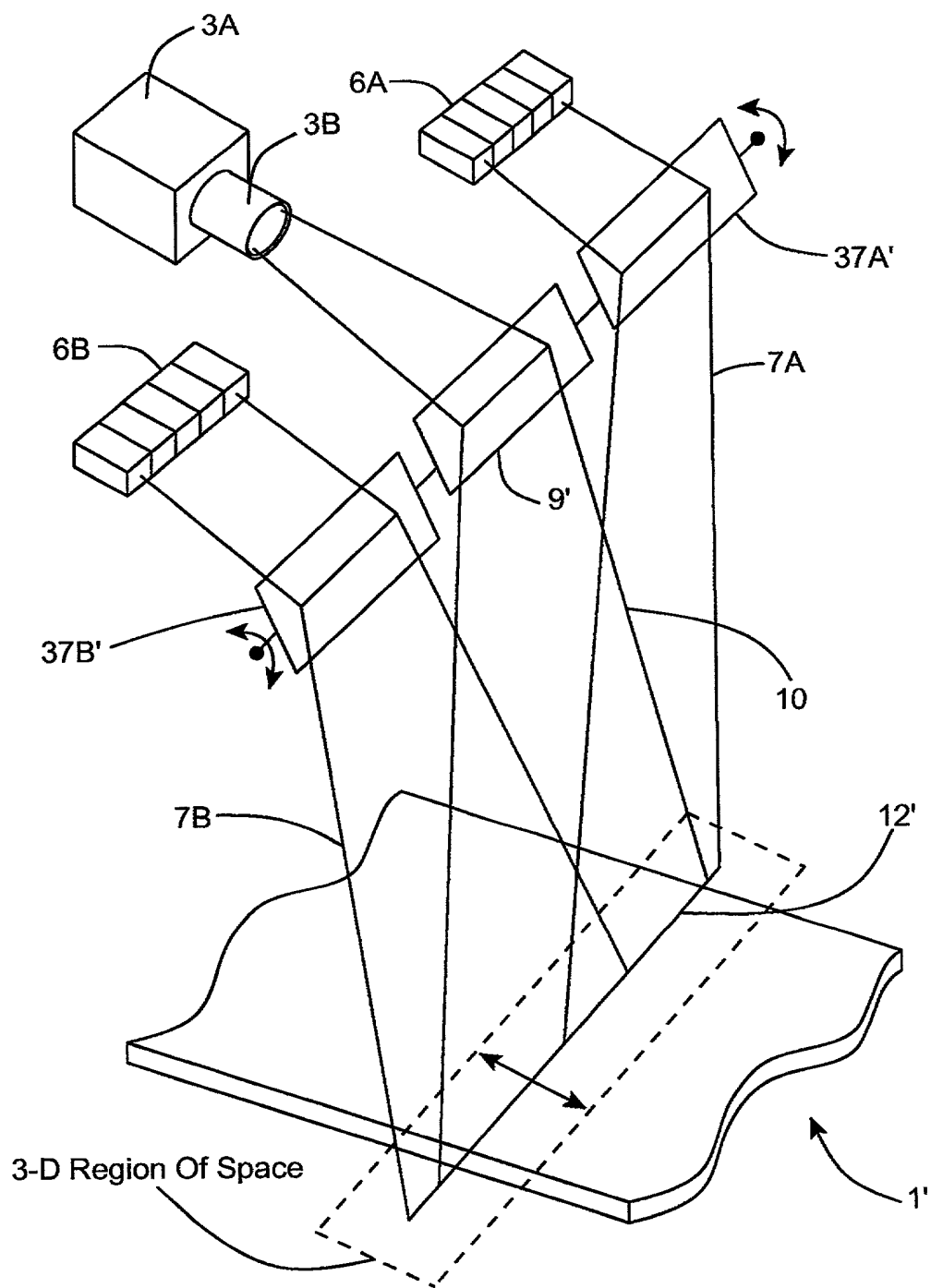


FIG. 1V2

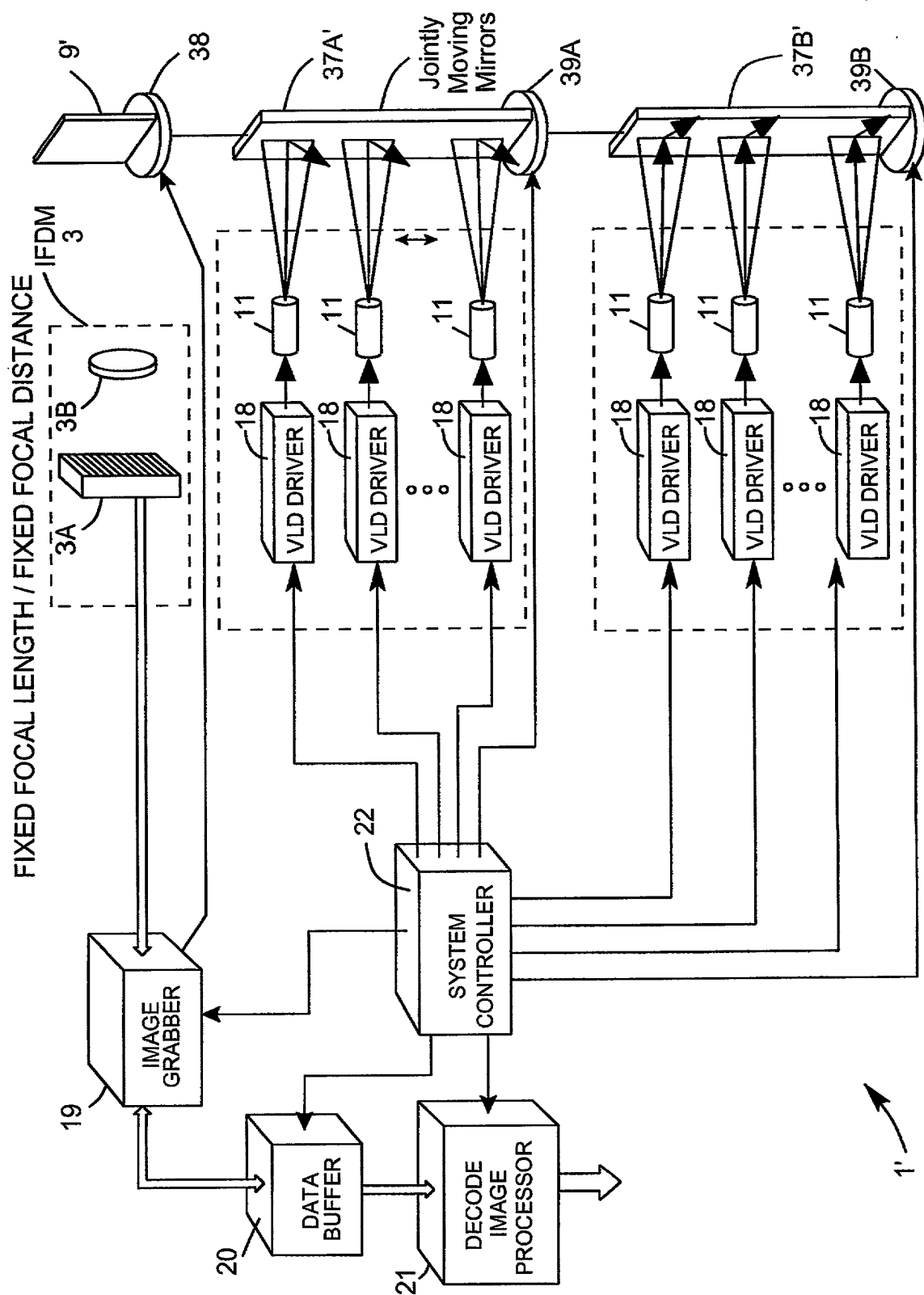
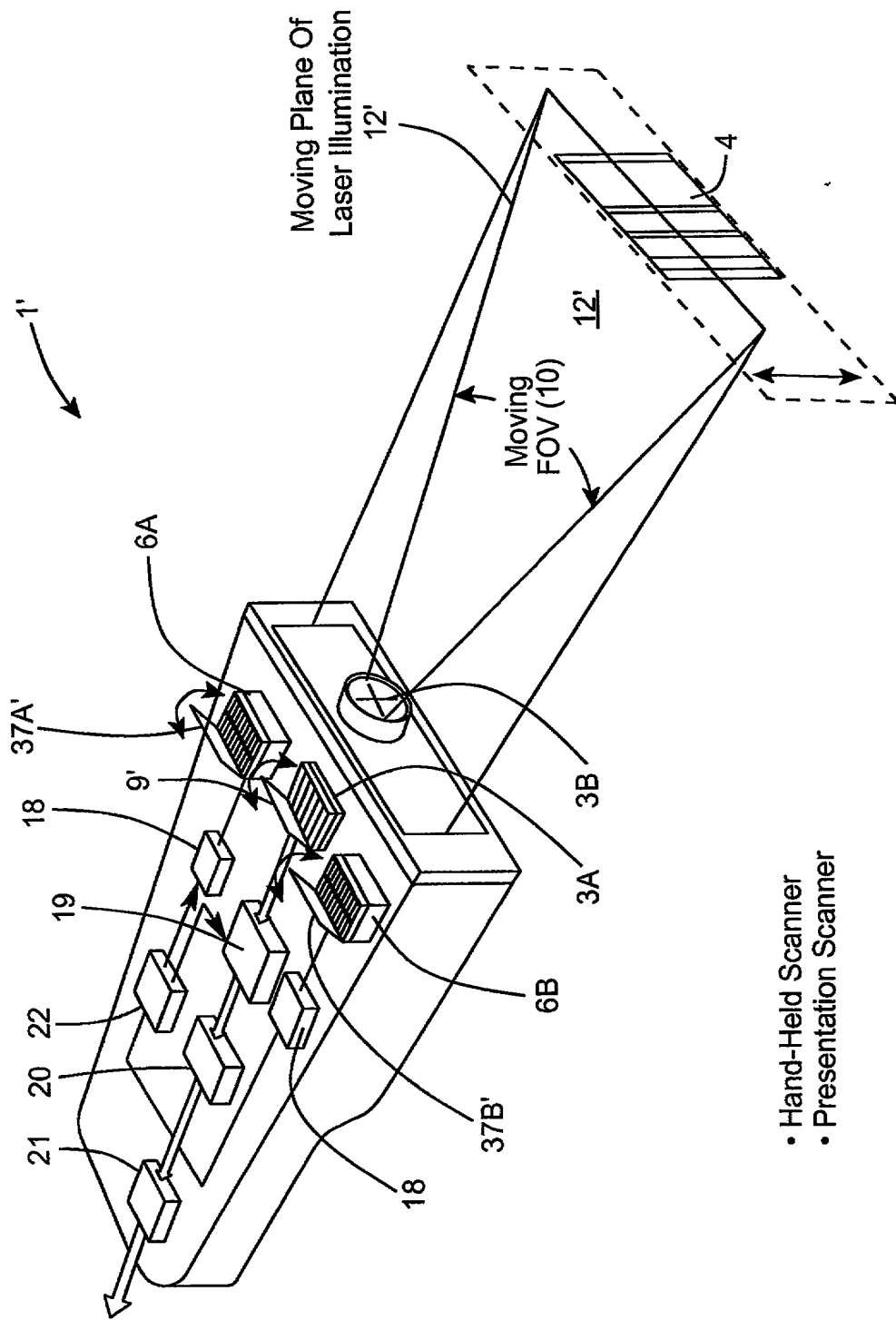
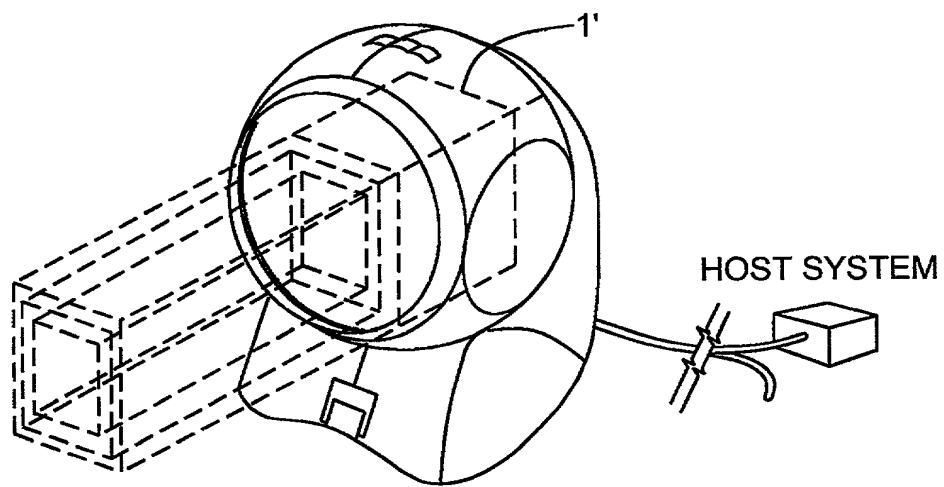


FIG. 1V3



- Hand-Held Scanner
- Presentation Scanner

FIG. 1V4



PRESENTATION TYPE SCANNER

FIG. 1V5

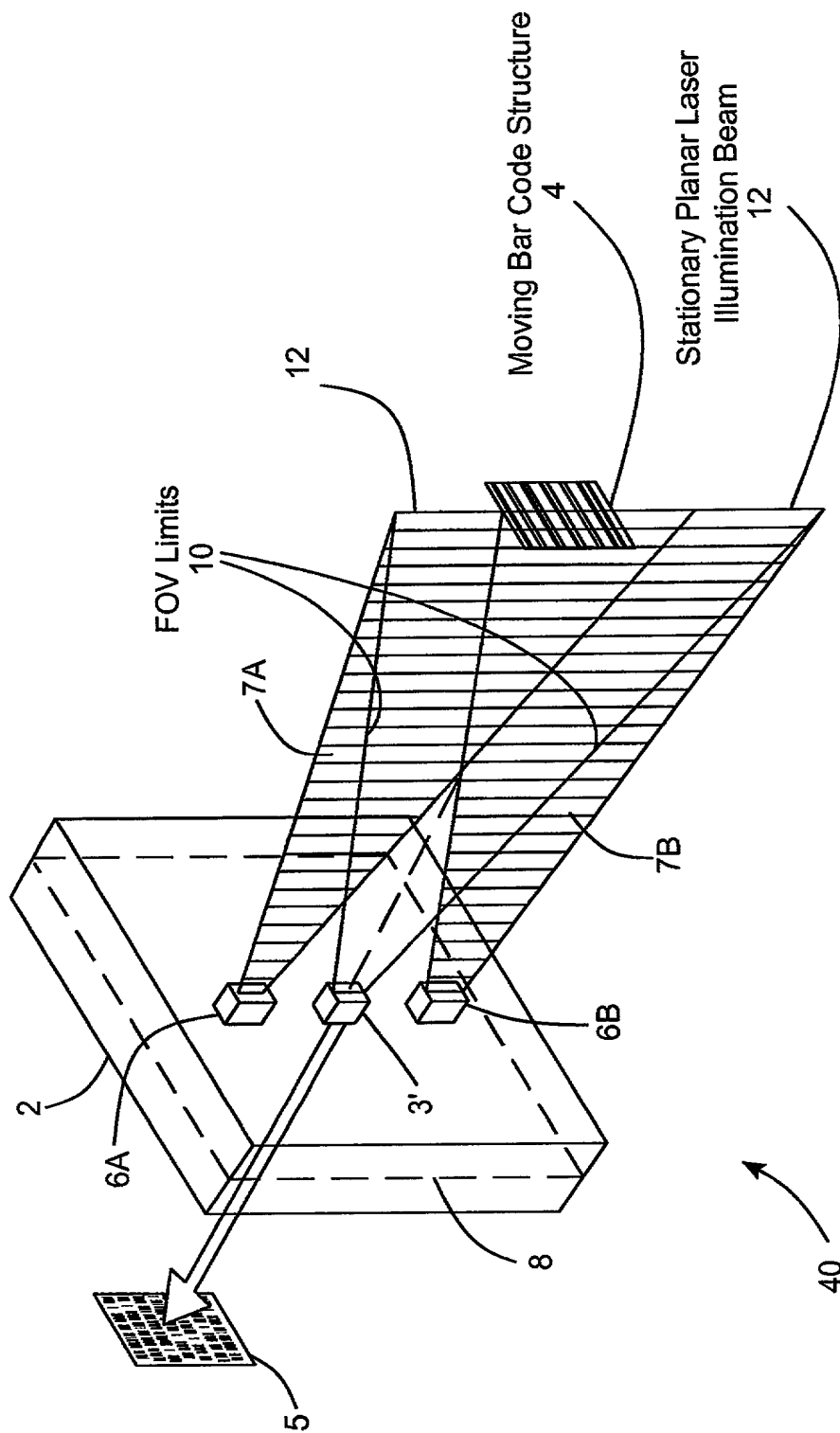


FIG. 2A

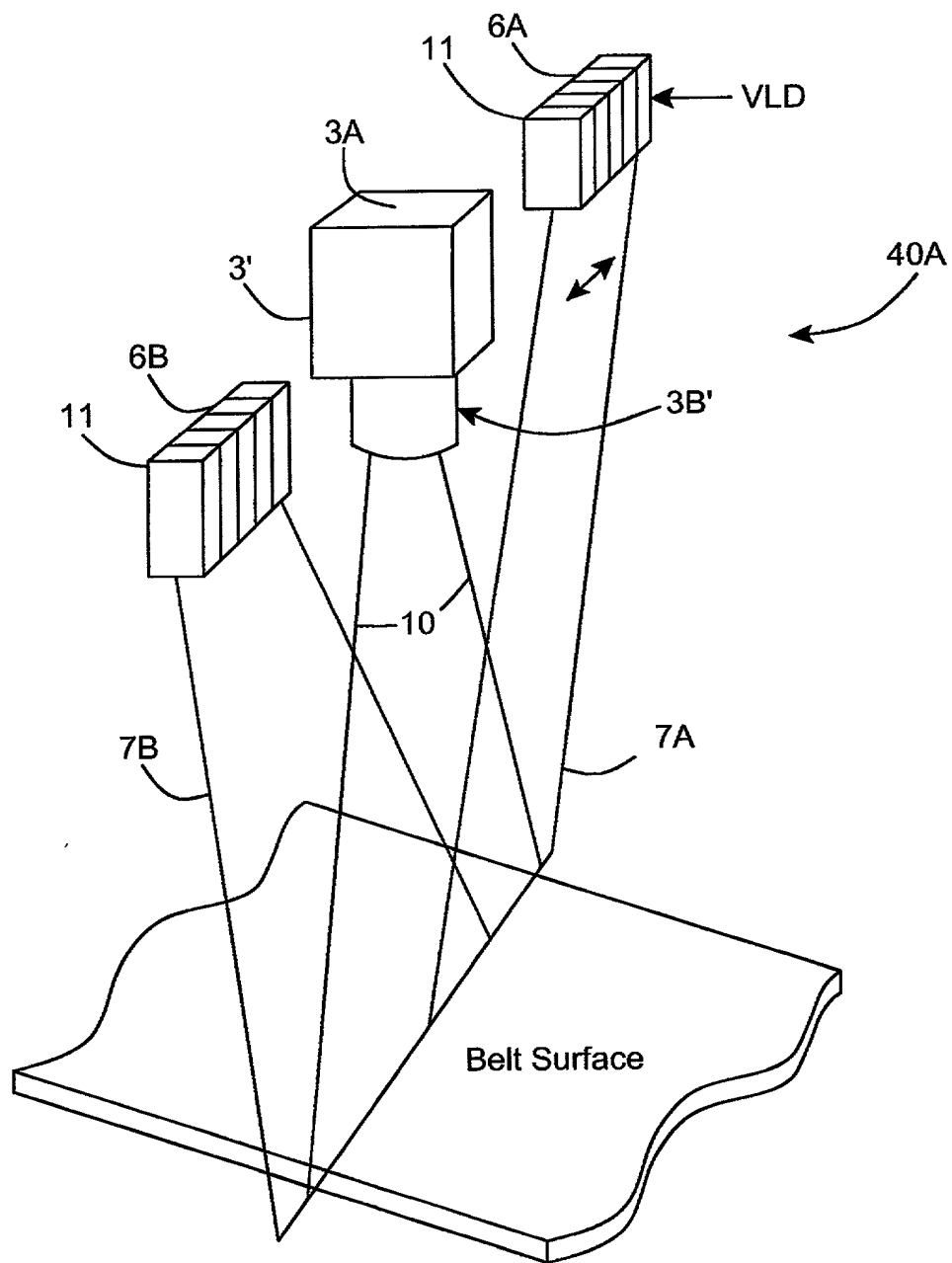


FIG. 2B1

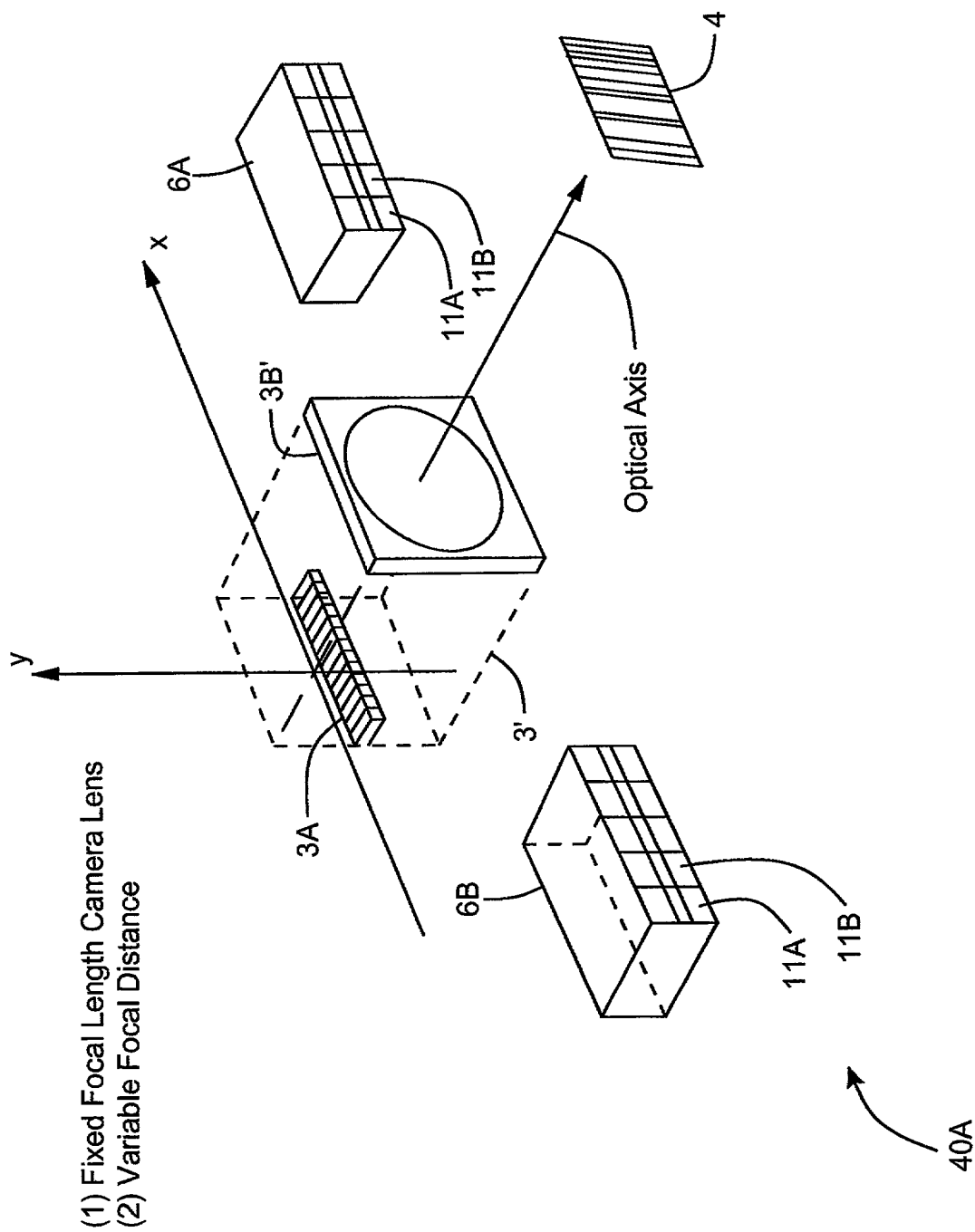


FIG. 2B2

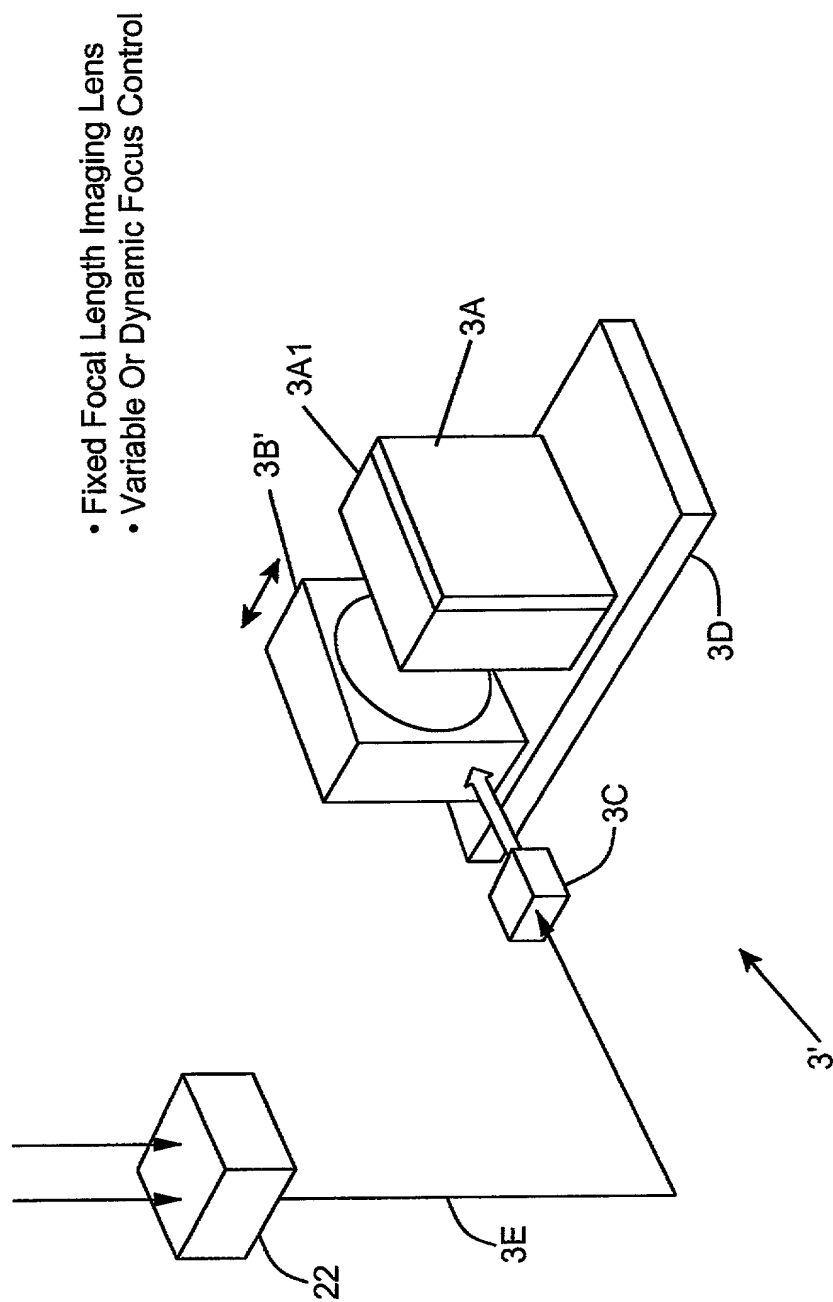


FIG. 2C2

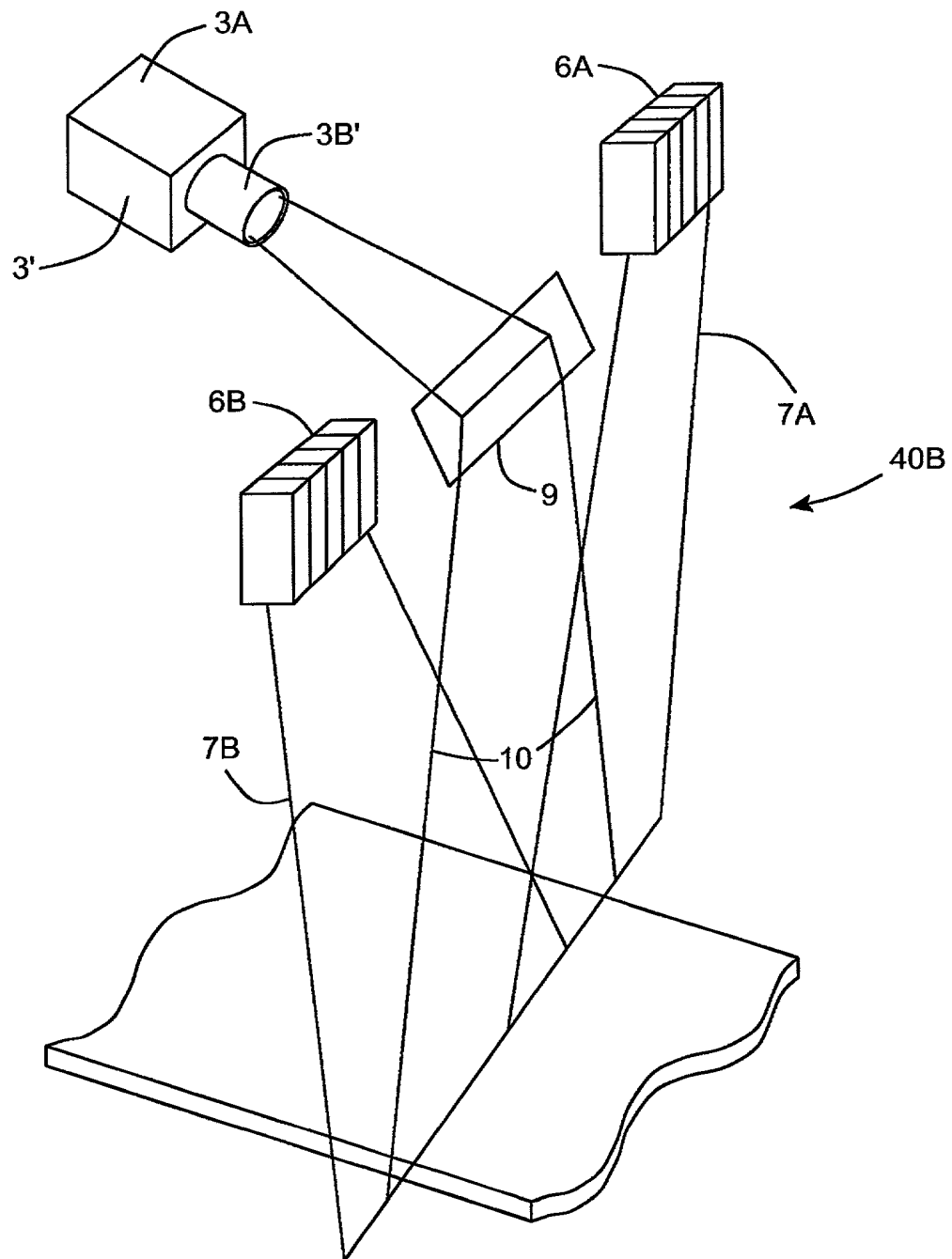


FIG. 2D1

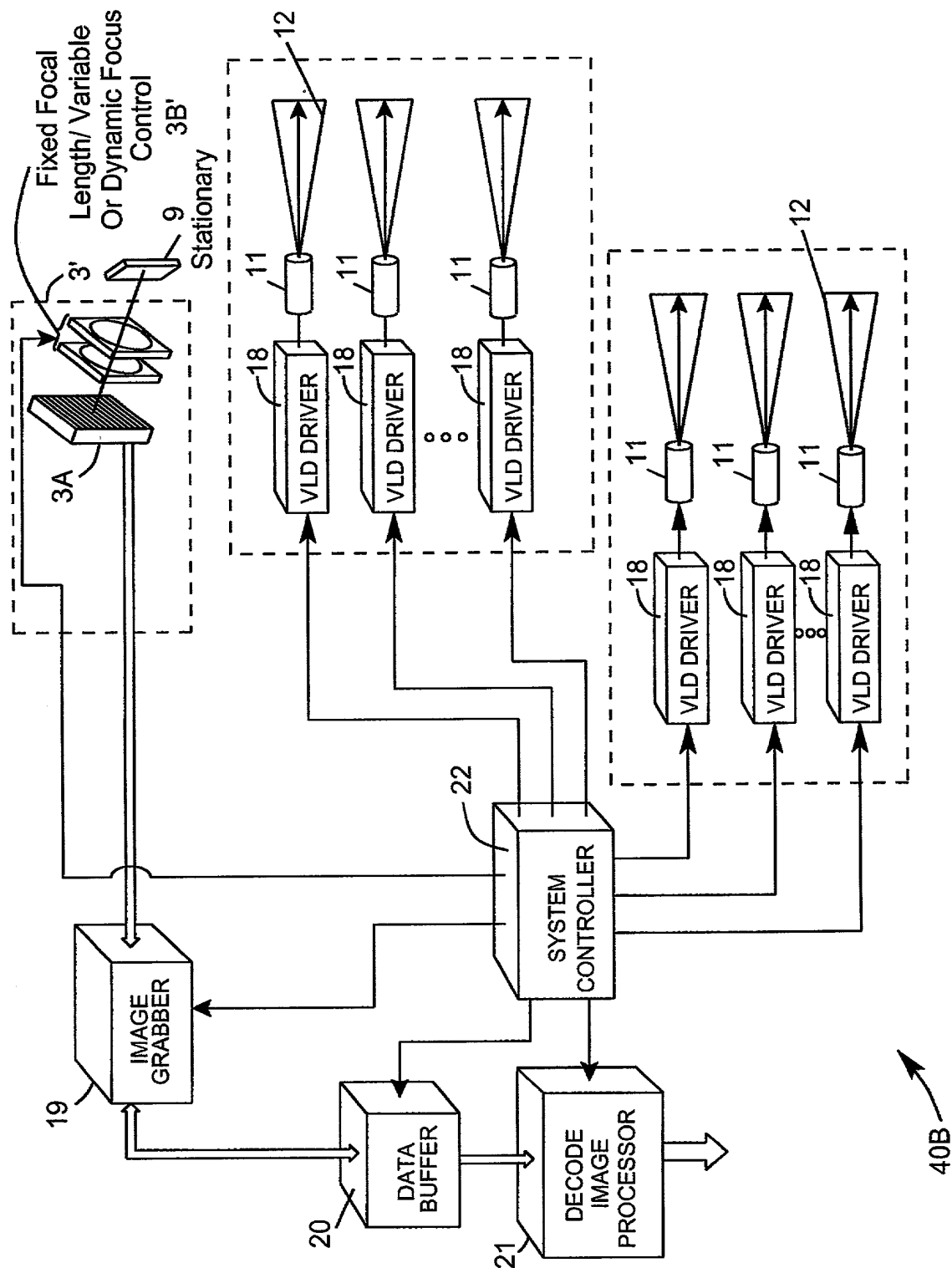


FIG. 2D2

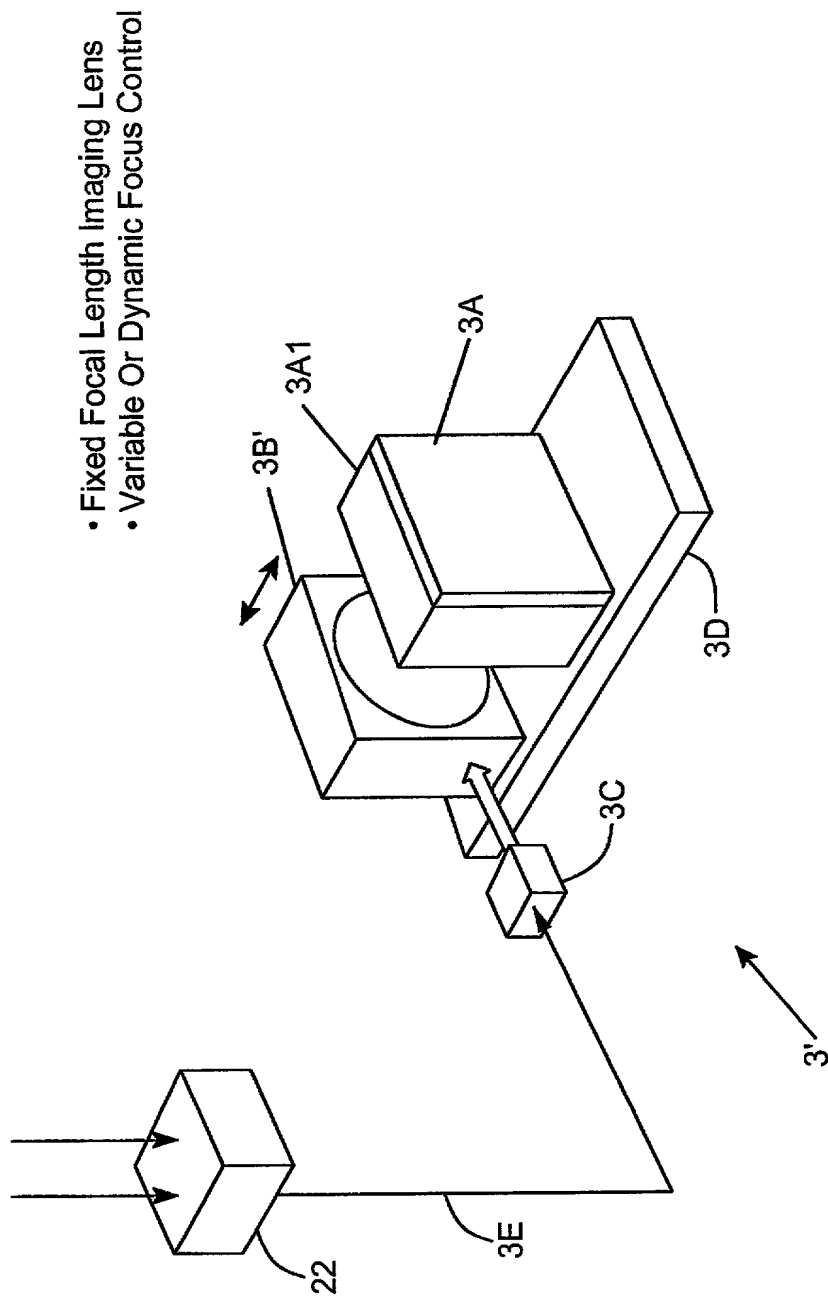


FIG. 2D3

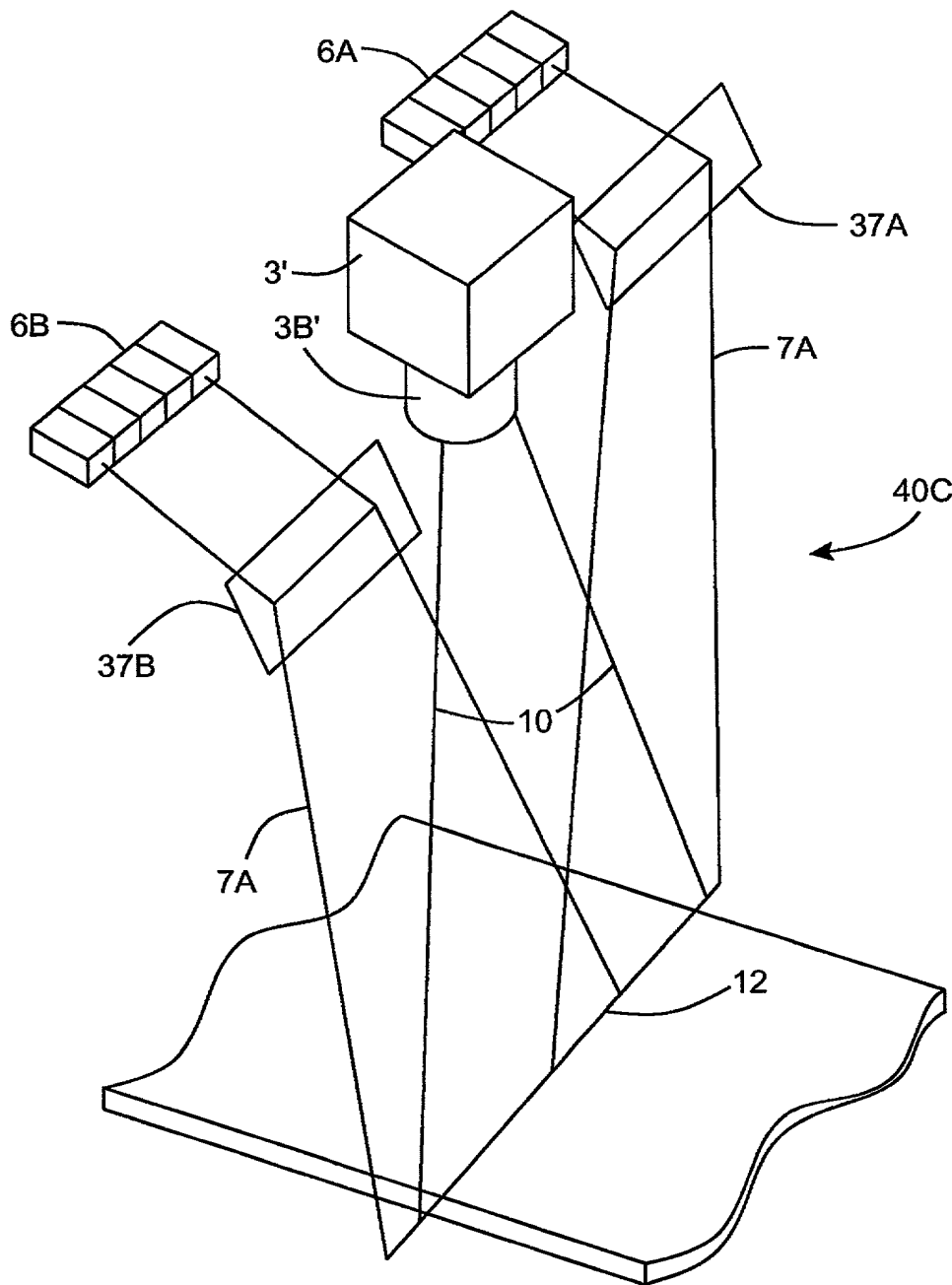


FIG. 2E1

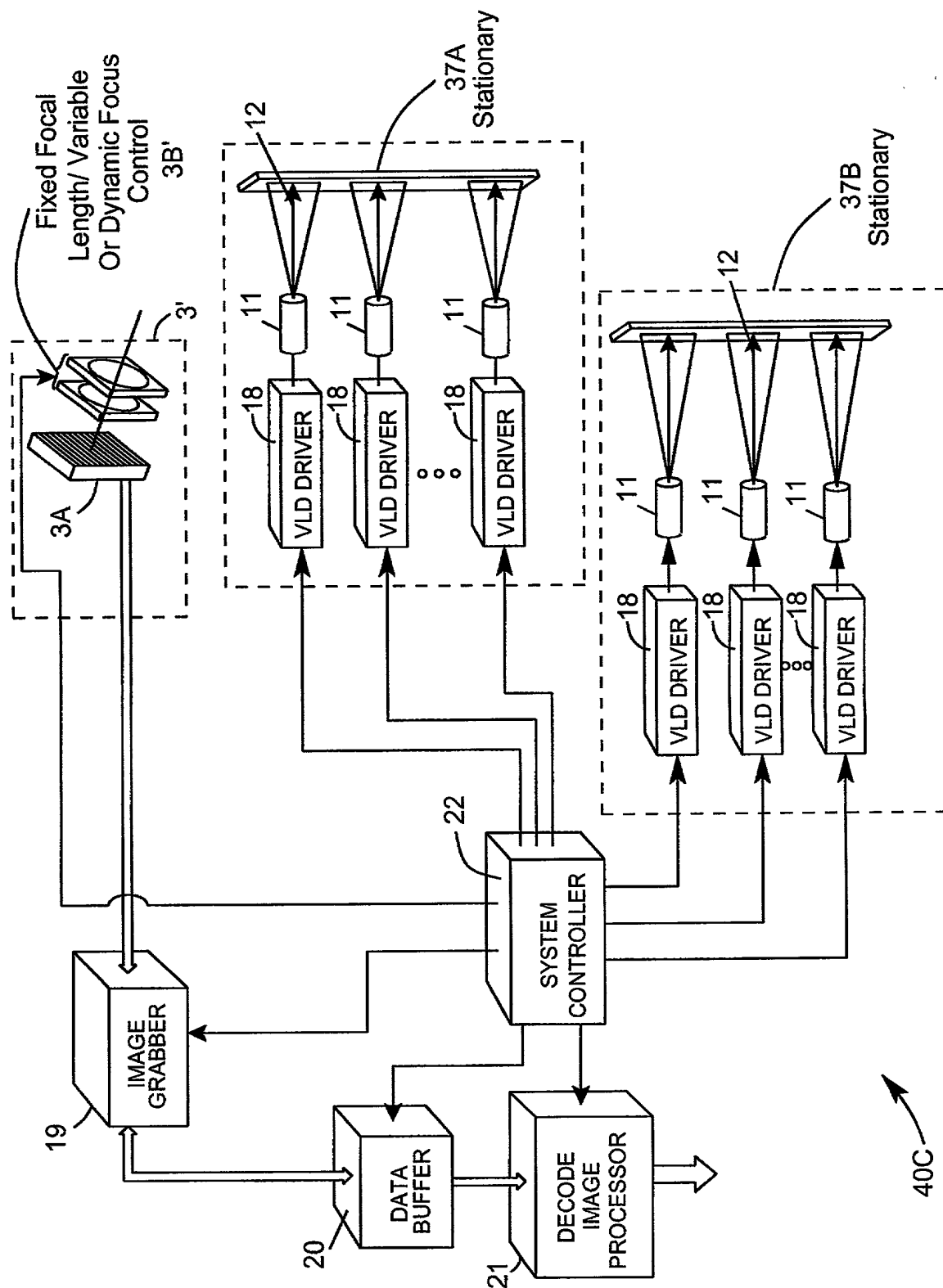


FIG. 2E2

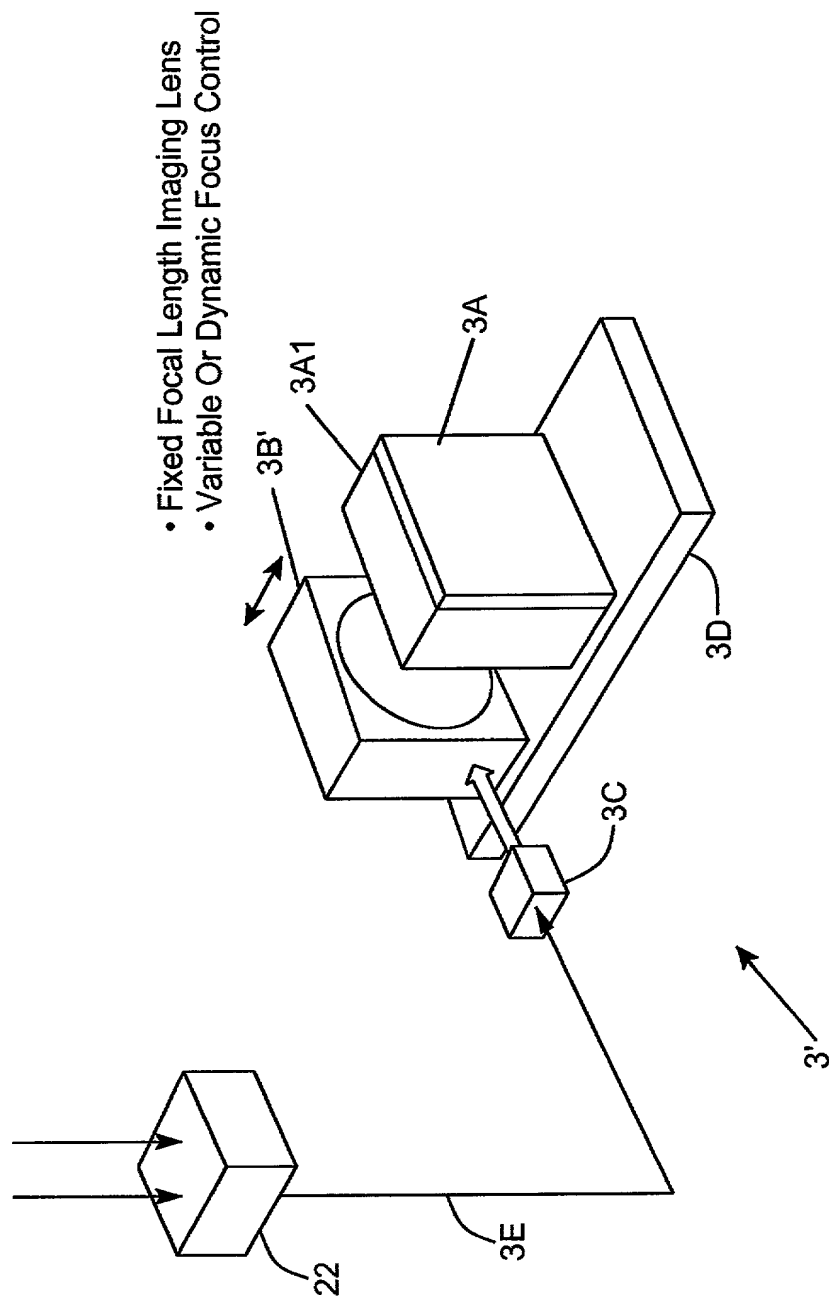


FIG. 2E3

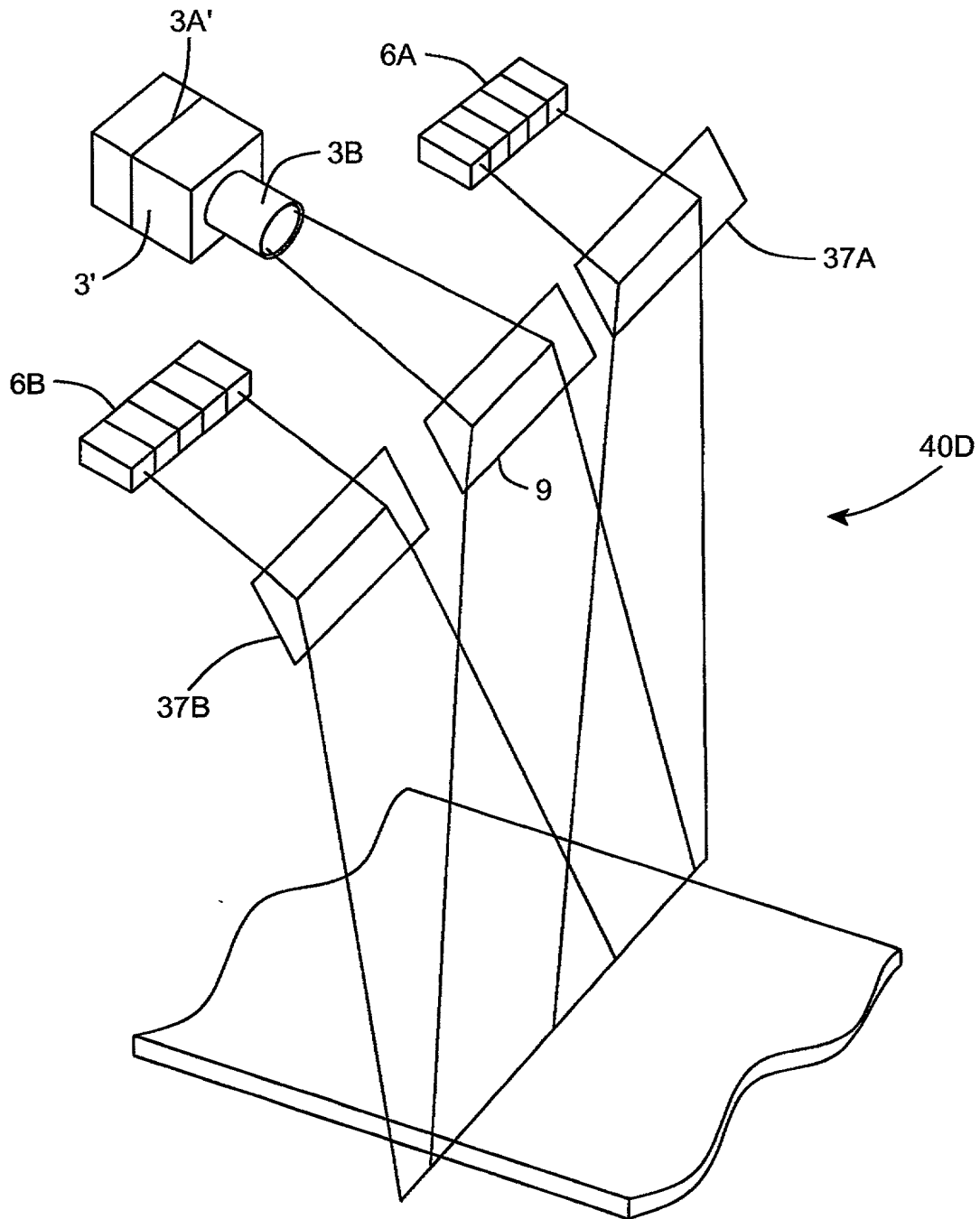


FIG. 2F1

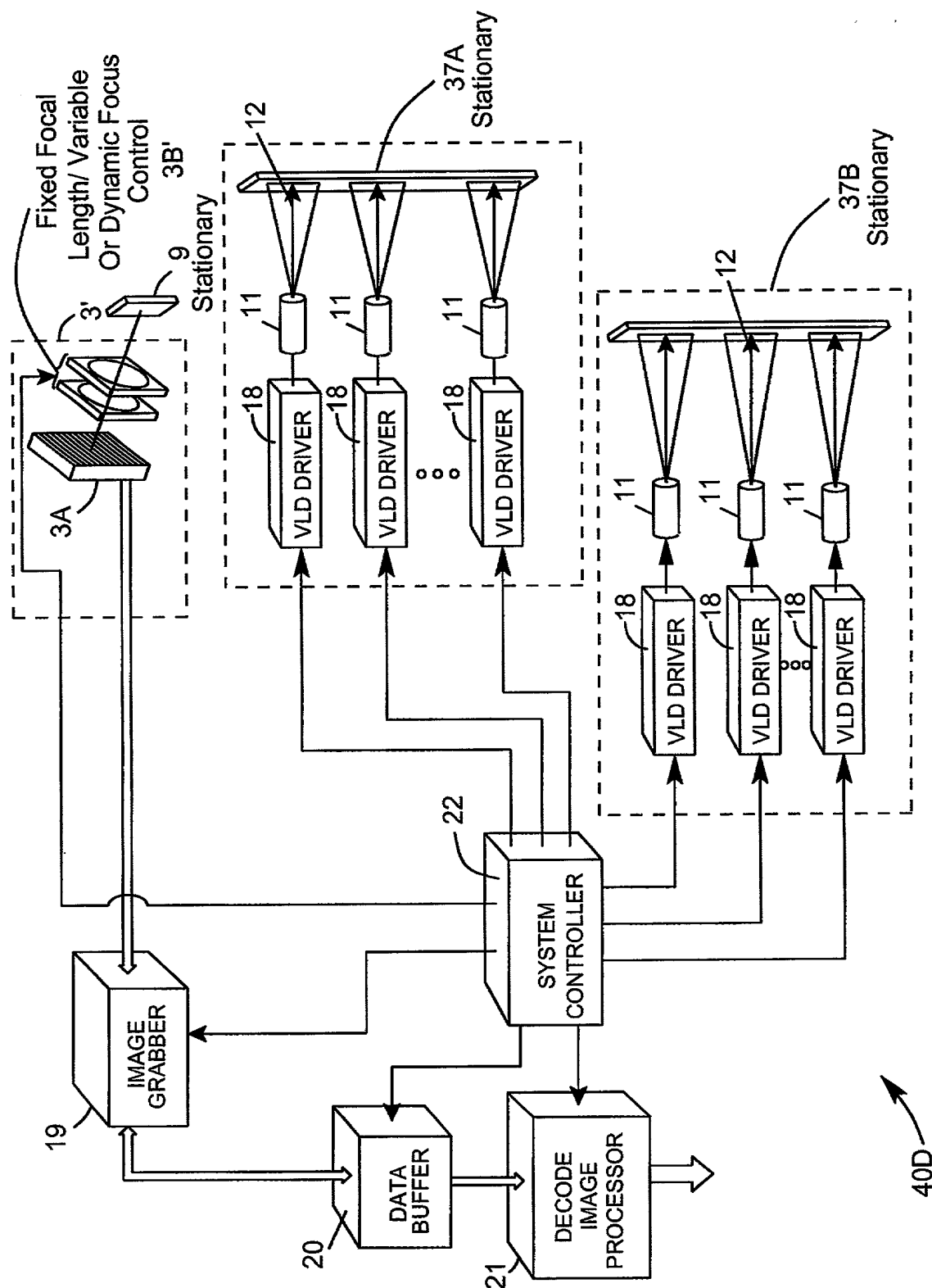


FIG. 2F2

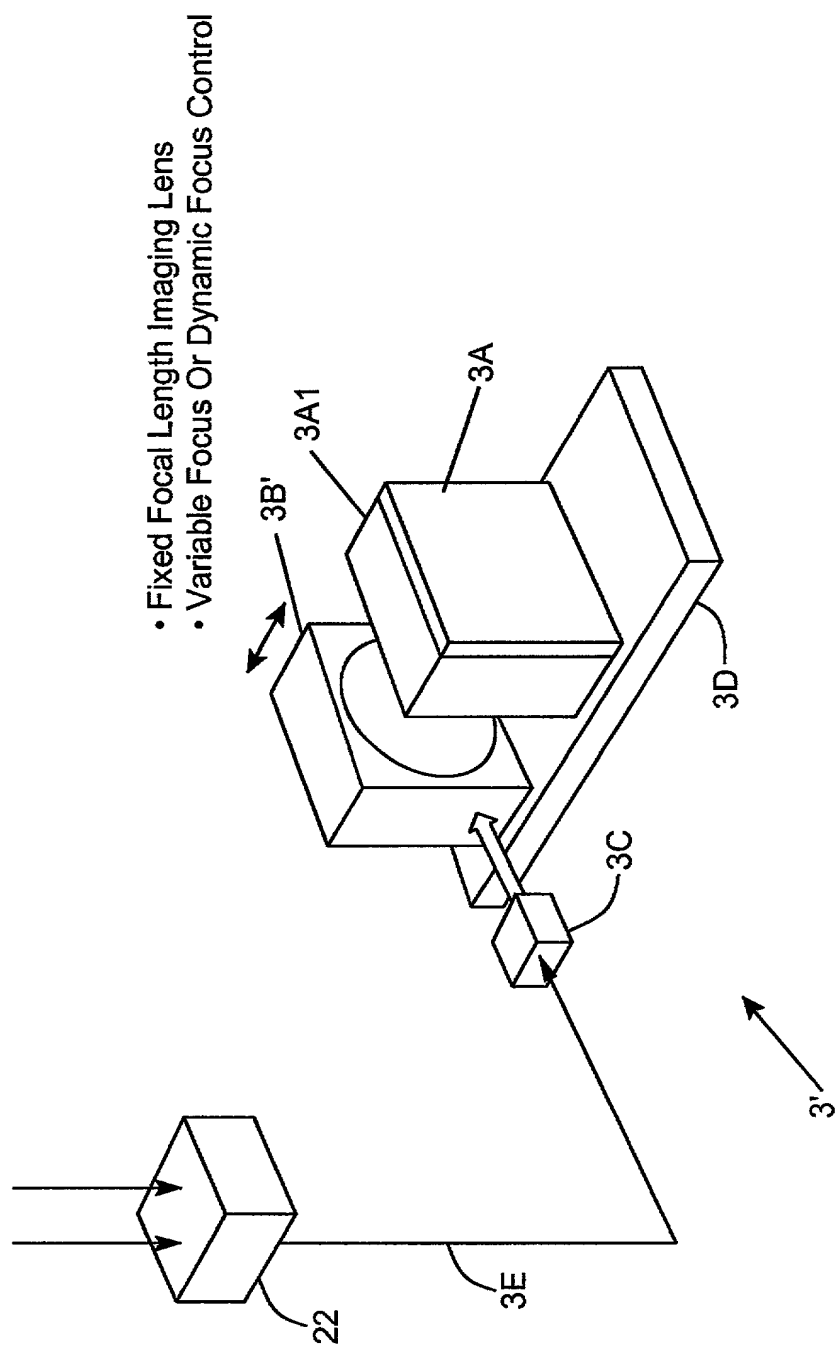


FIG. 2F3

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Top Conveyor Scanner:

- Fixed Focal Length Imaging Lens
- Variable Focal Distance Control

Side Conveyor Scanner:

- Fixed Focal Length Imaging Lens
- Dynamic Focal Distance Control

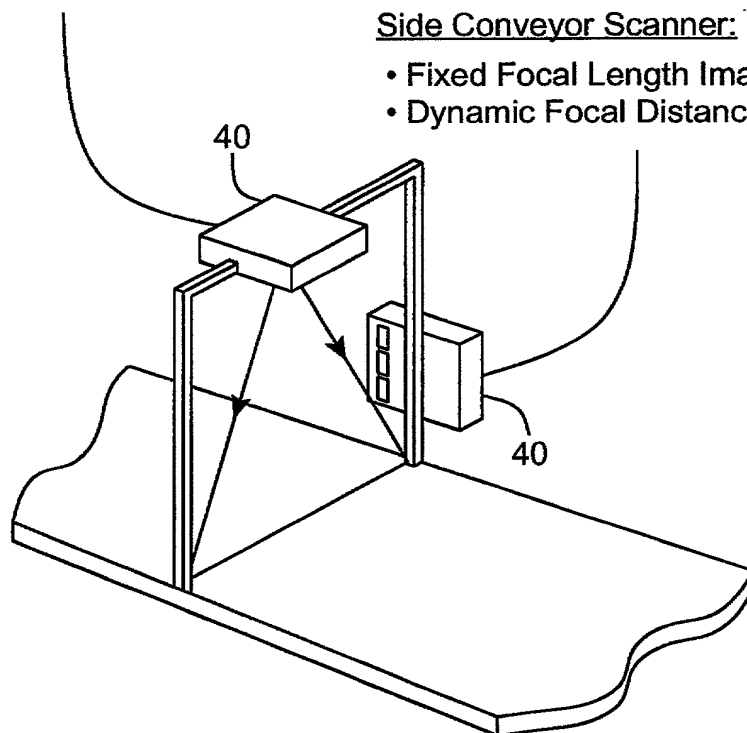


FIG. 2G

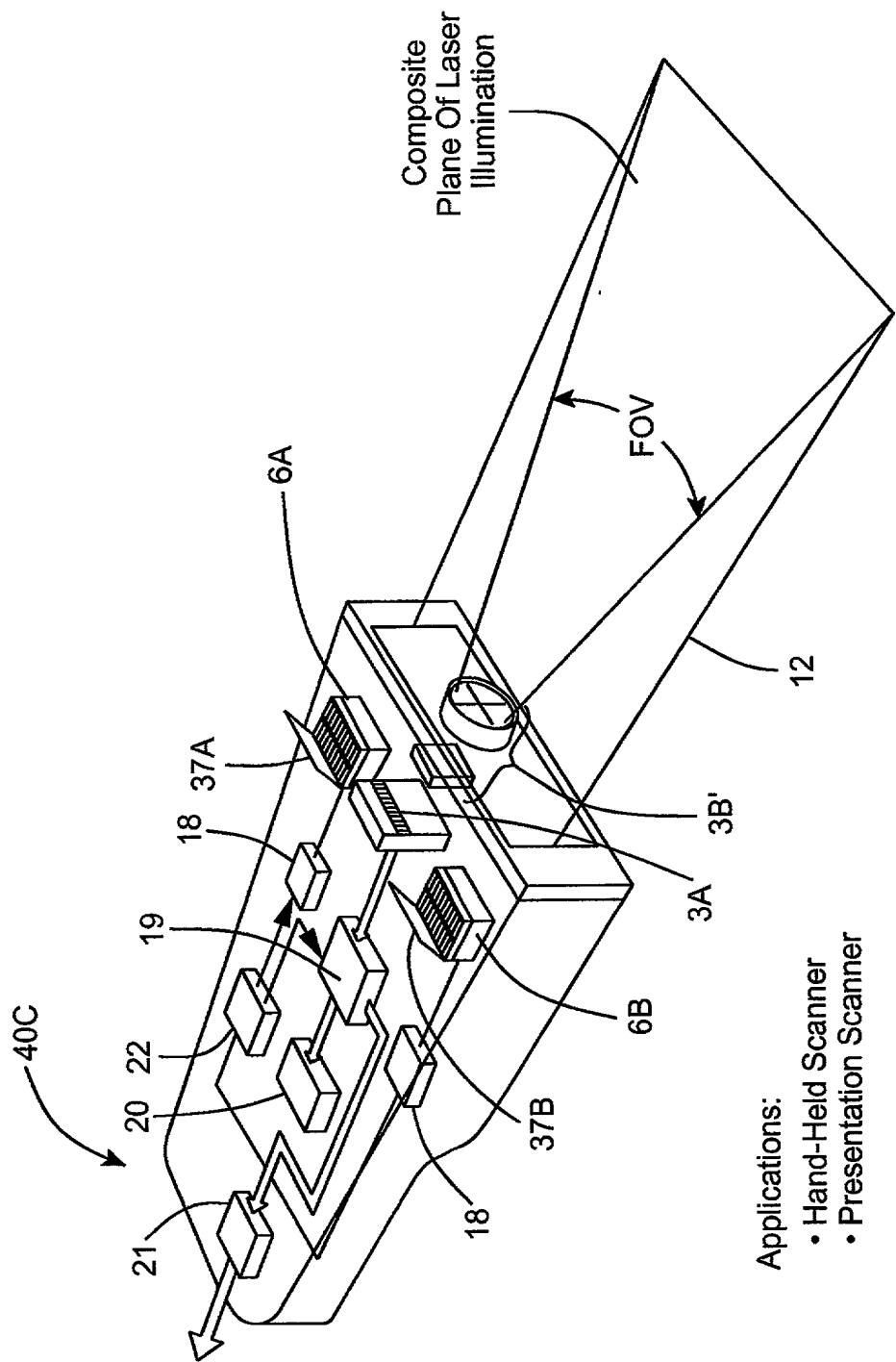


FIG. 2H

- Applications:
- Hand-Held Scanner
 - Presentation Scanner

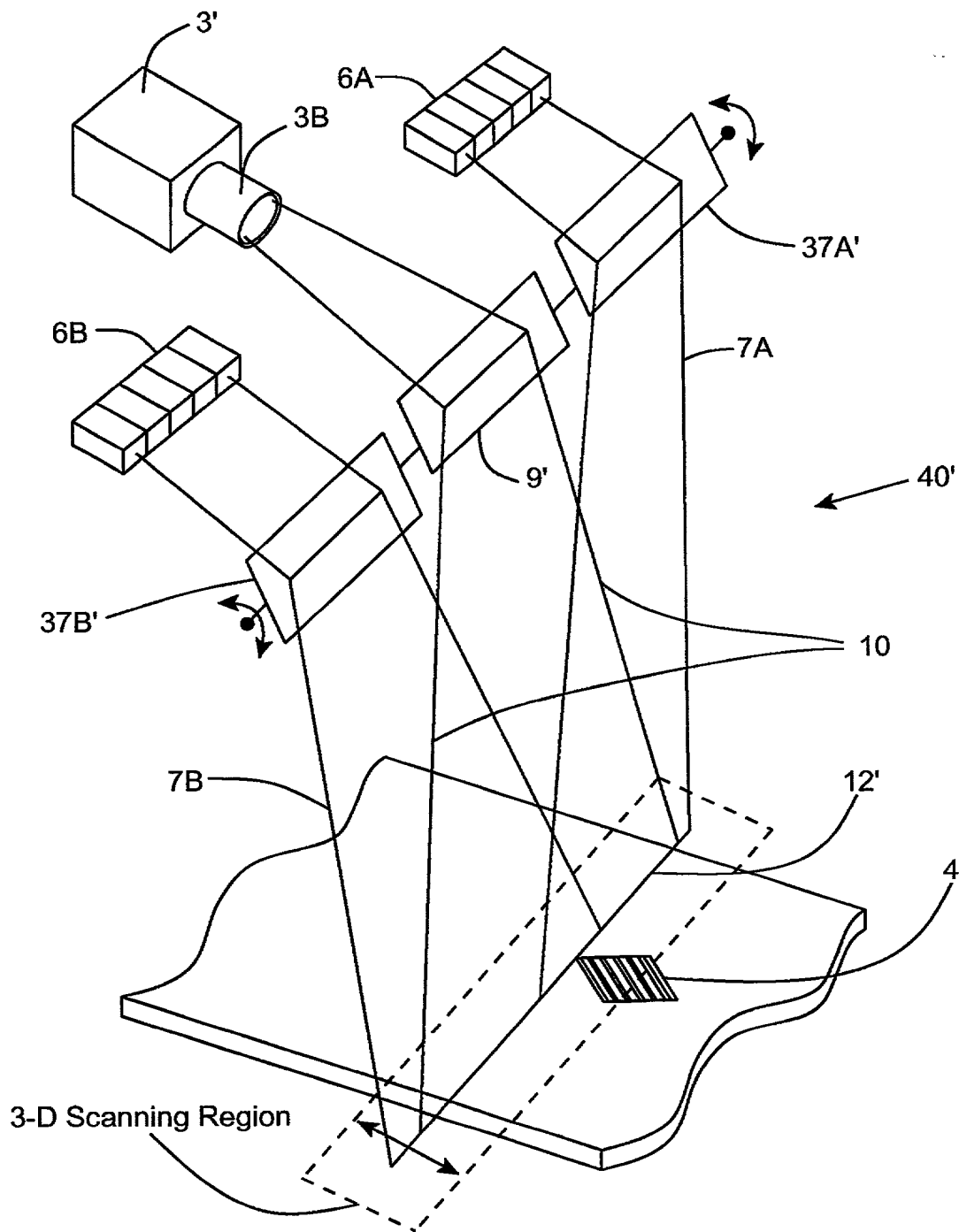


FIG. 212

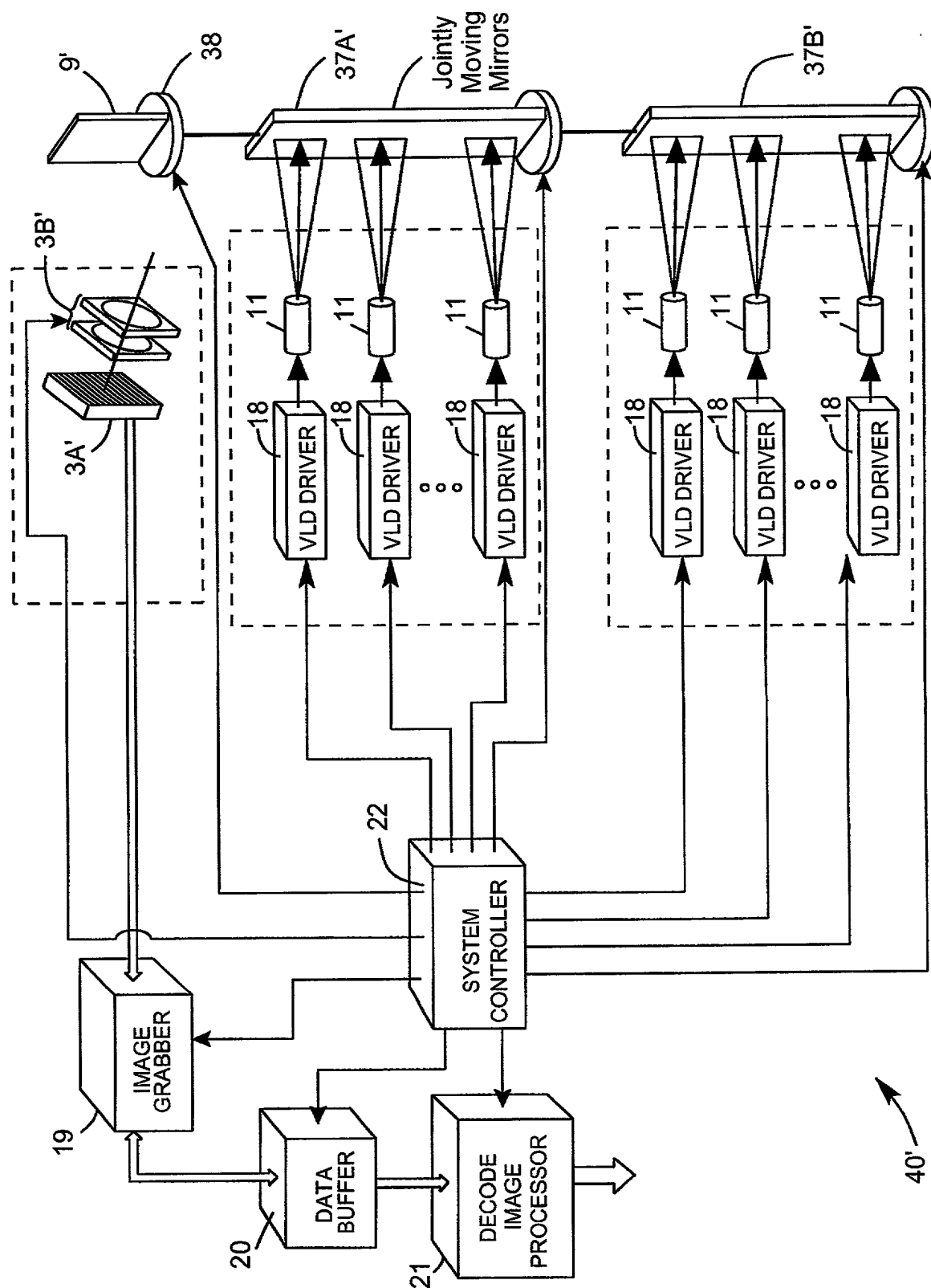


FIG. 2I3

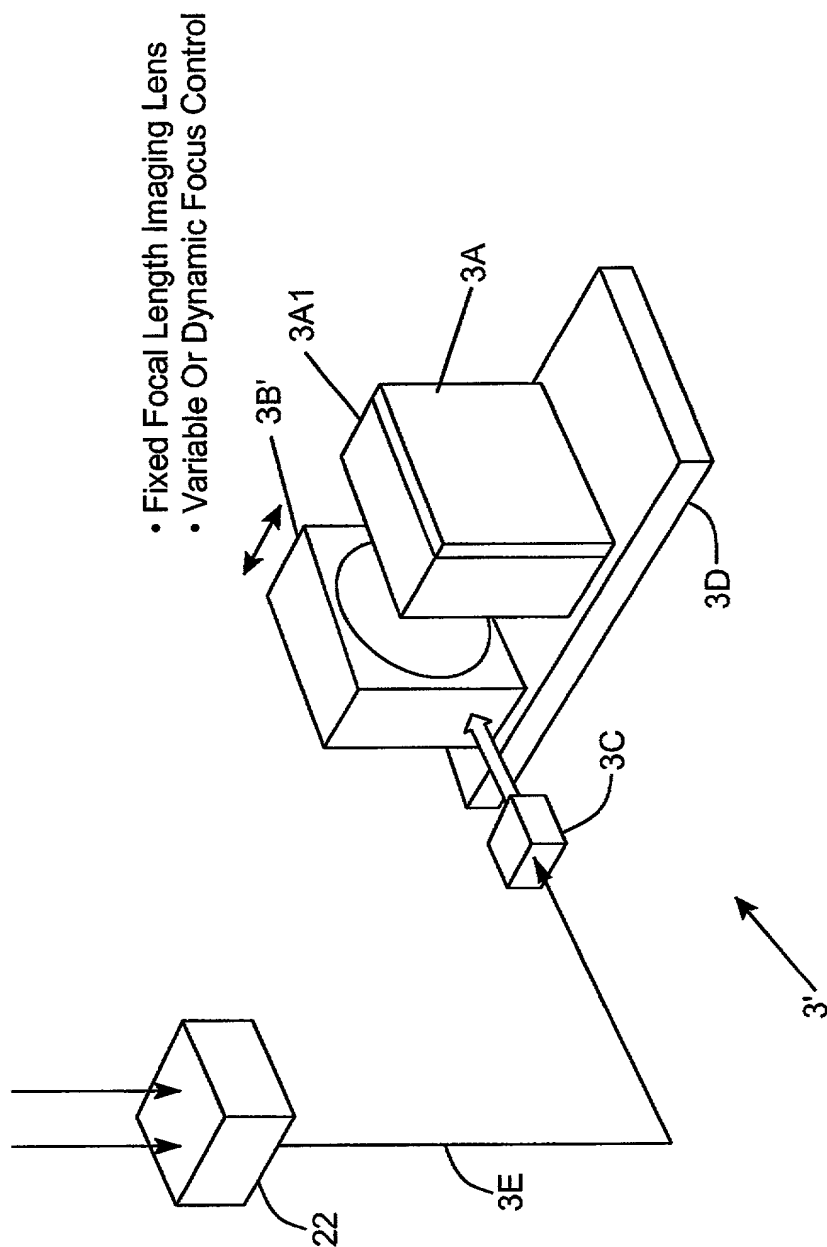


FIG. 214

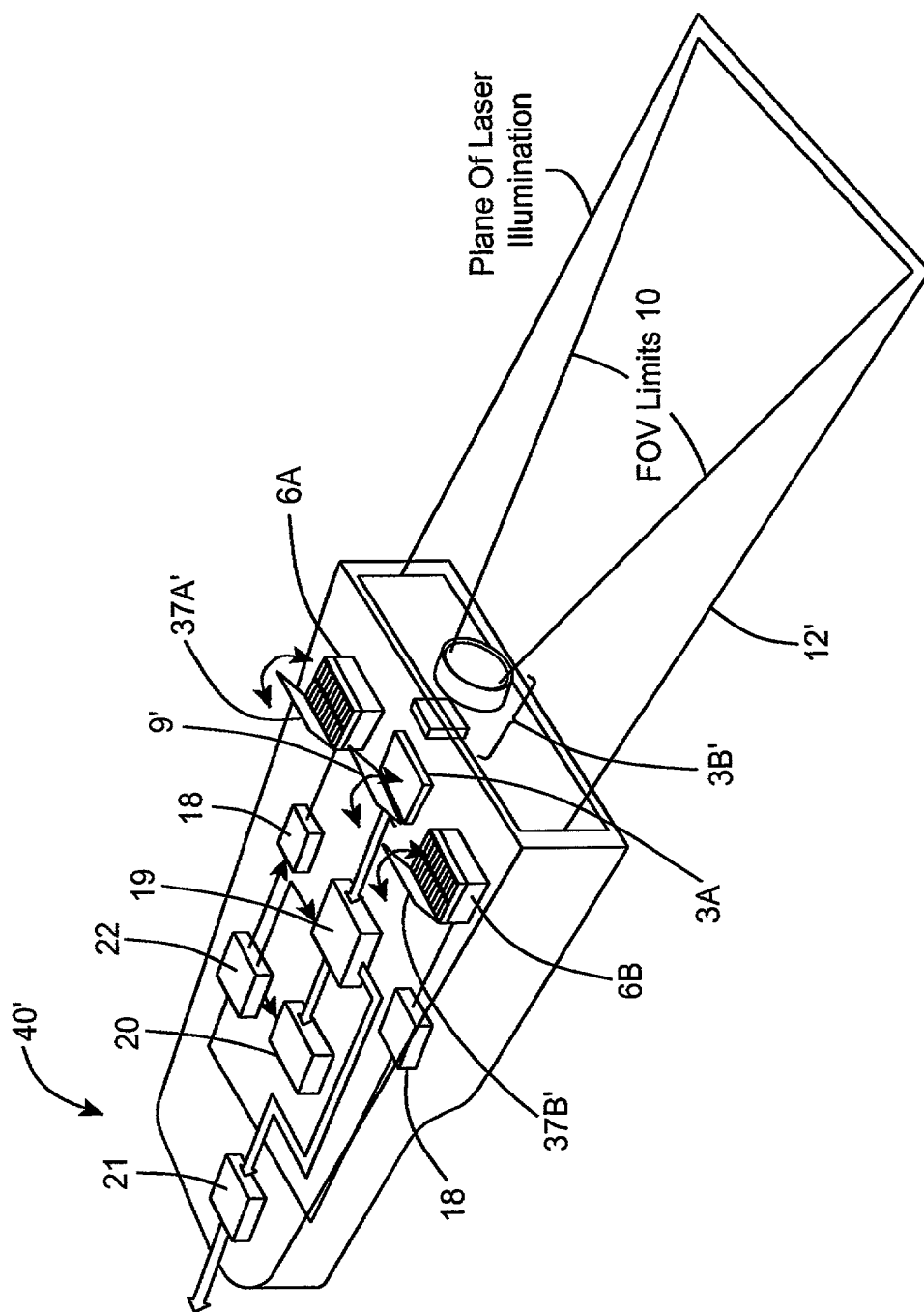


FIG. 215

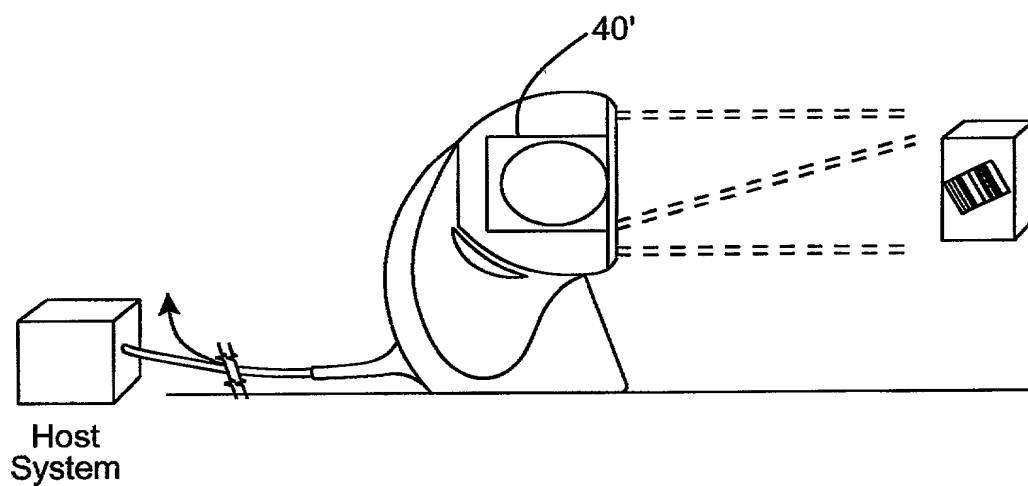


FIG. 216

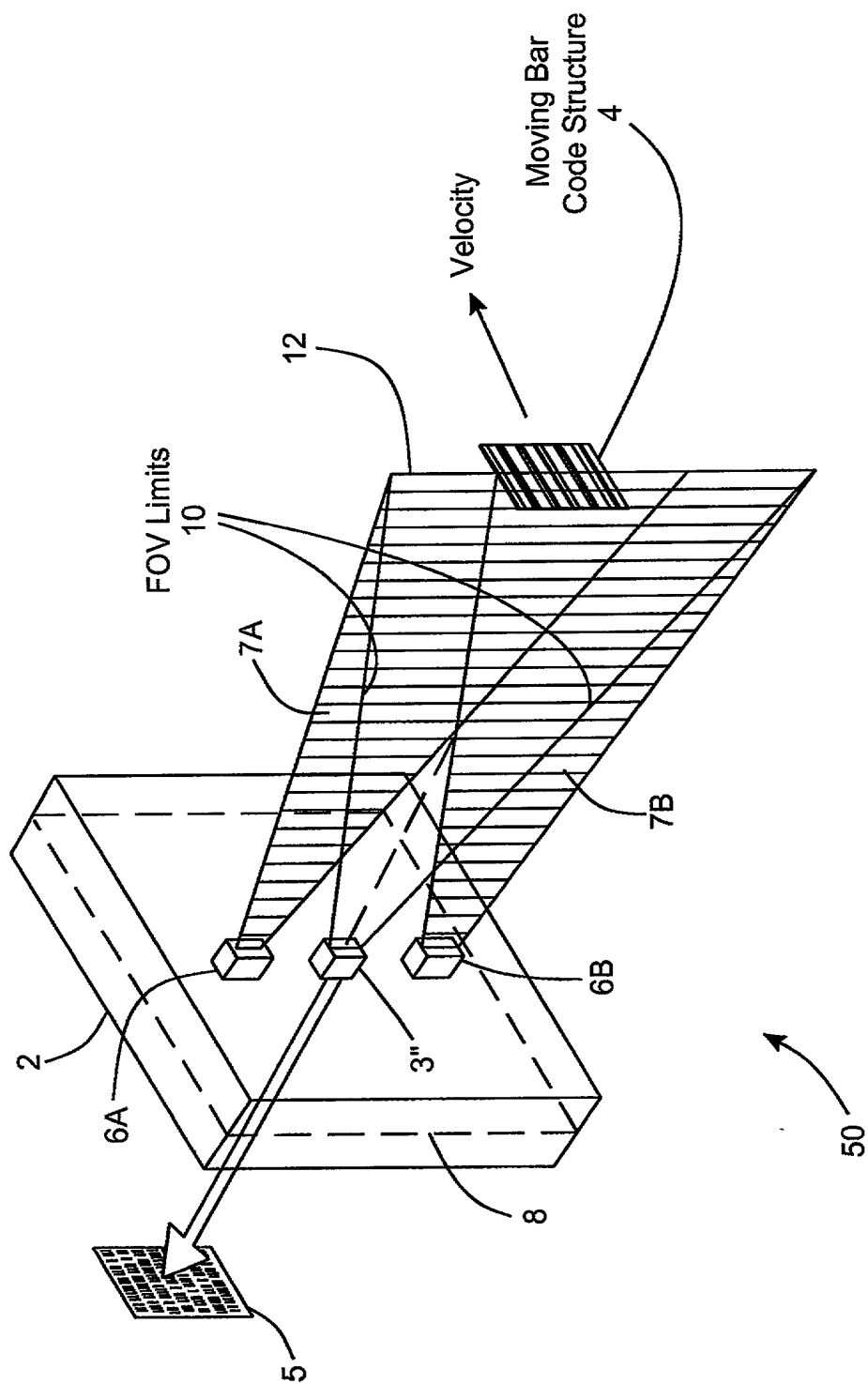


FIG. 3A

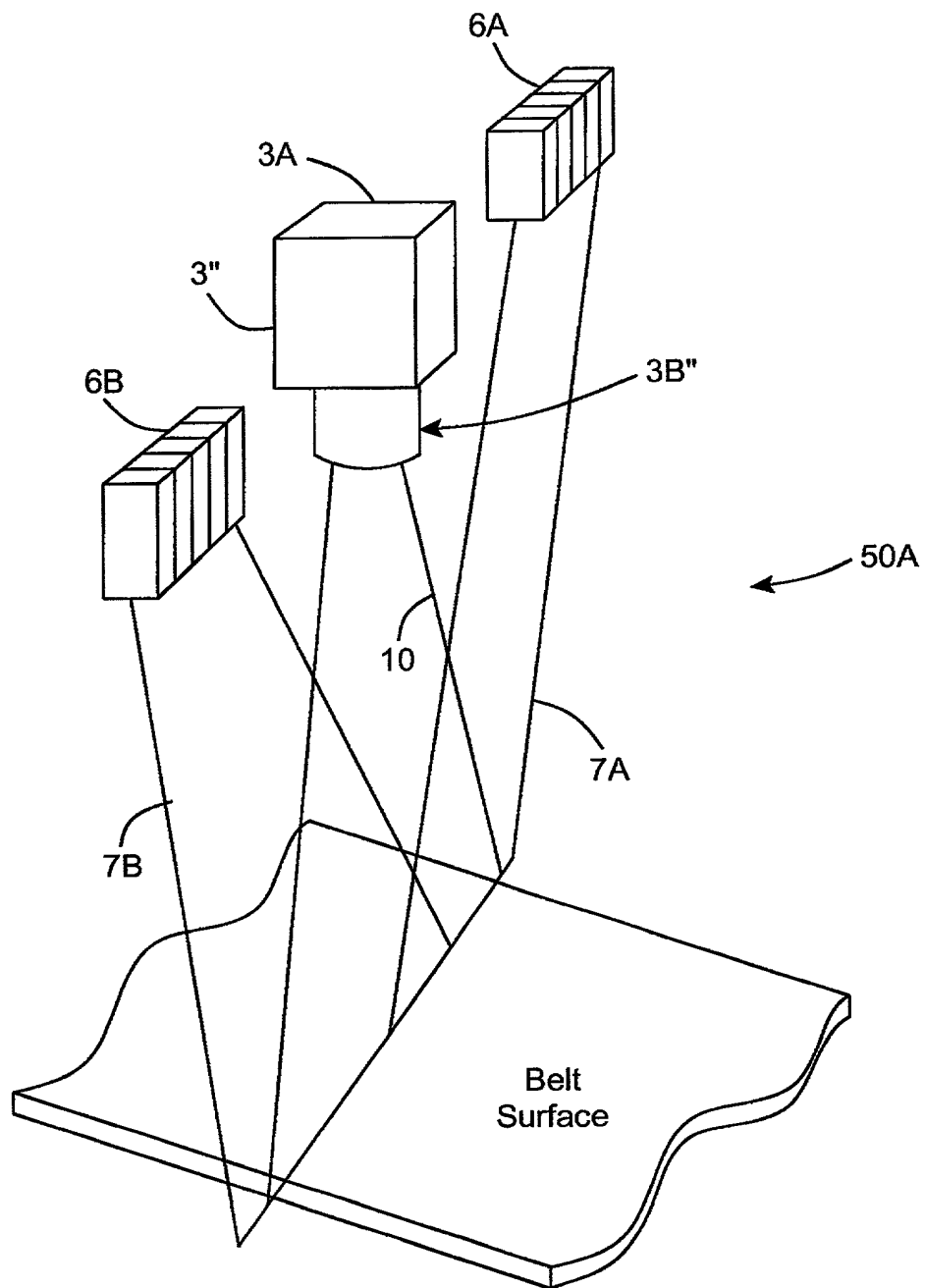


FIG. 3B1

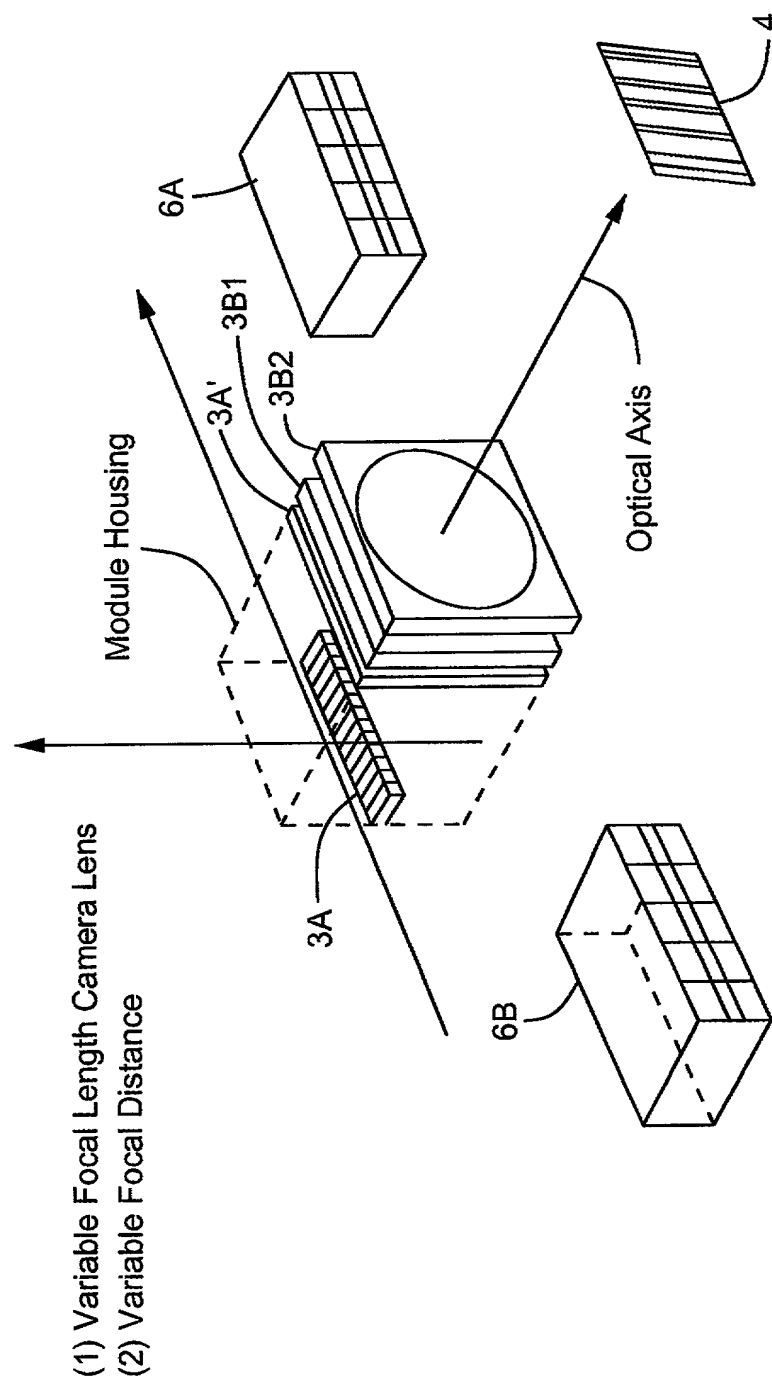


FIG. 3B2

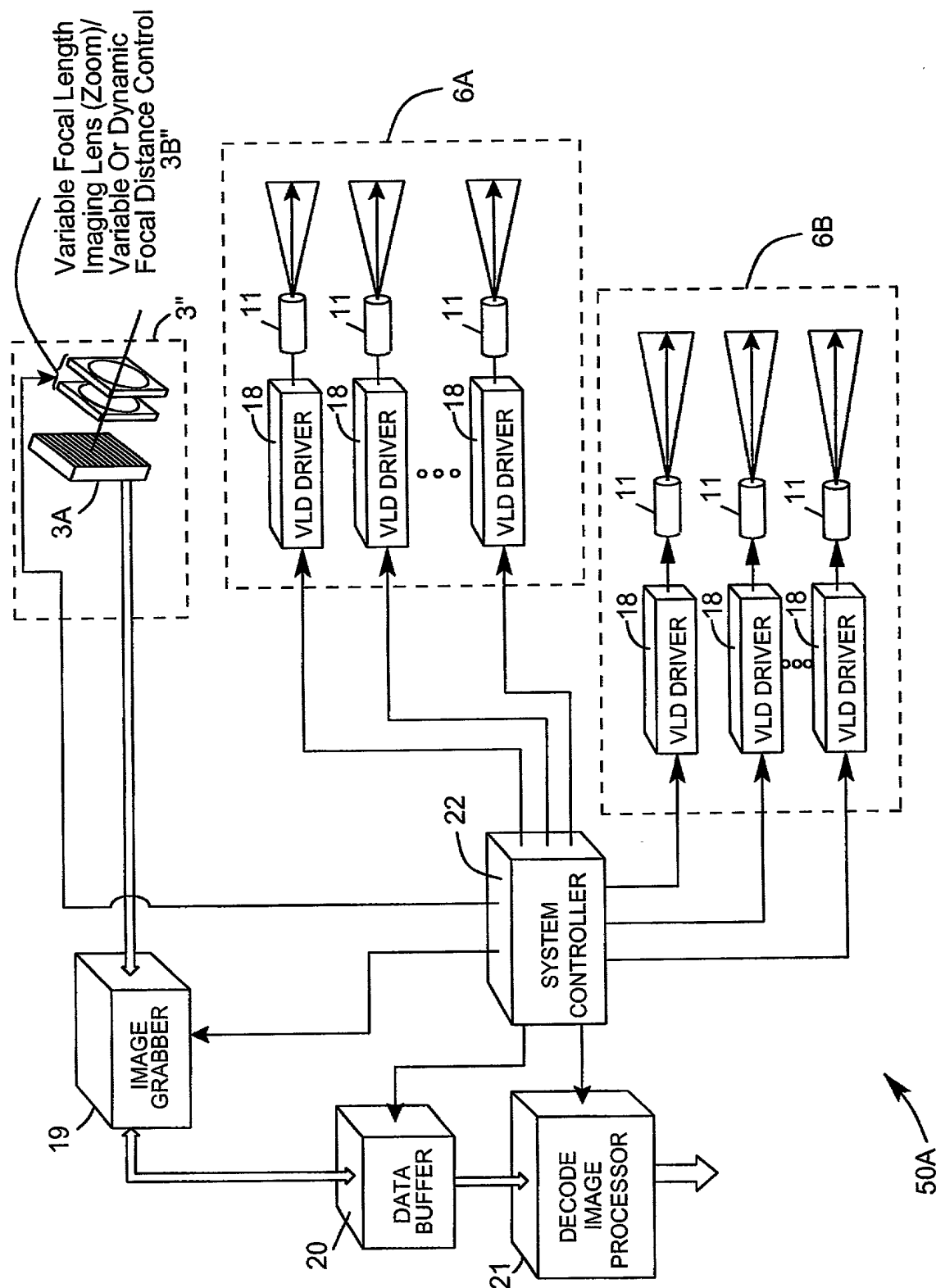


FIG. 3C1

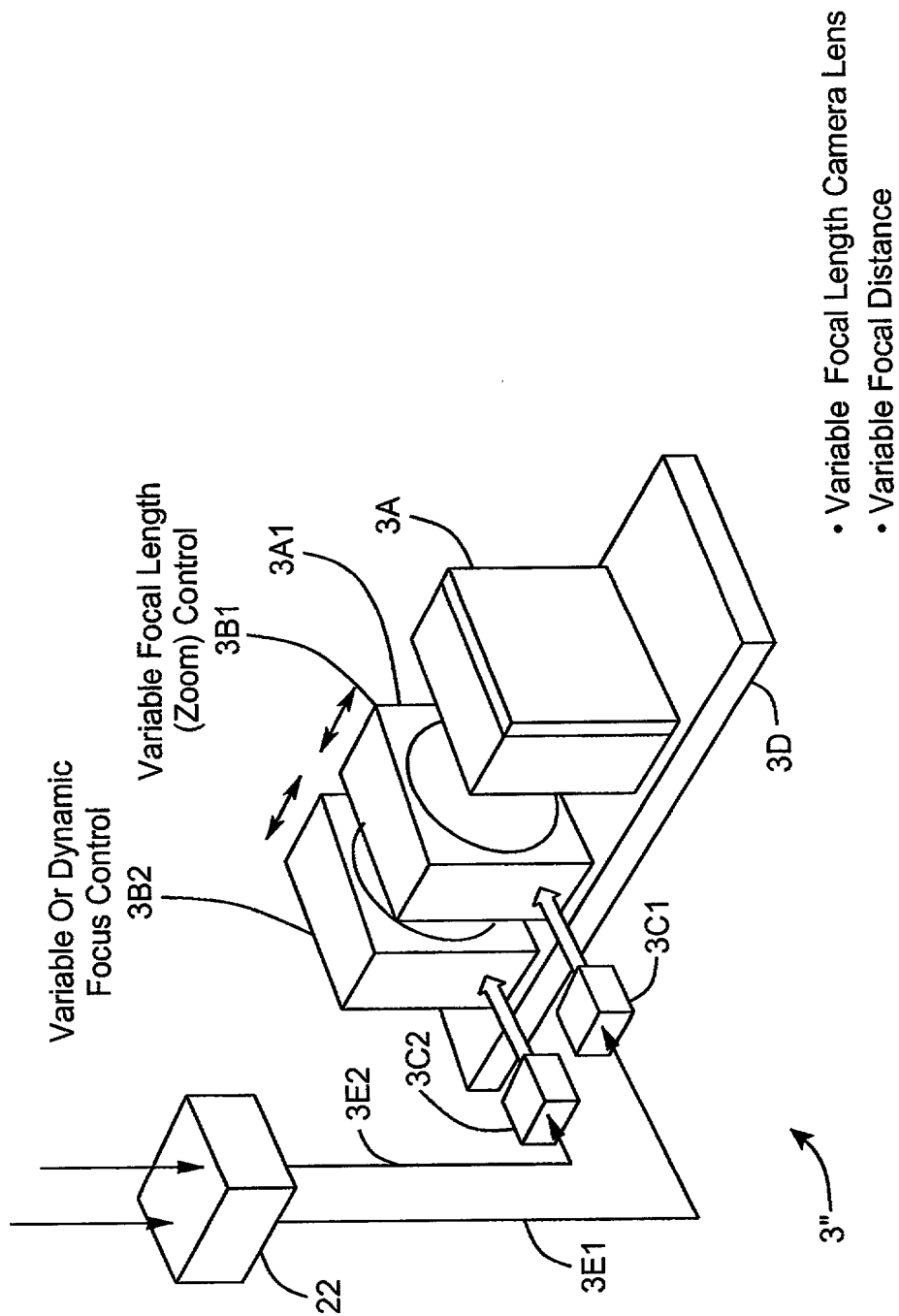


FIG. 3C2

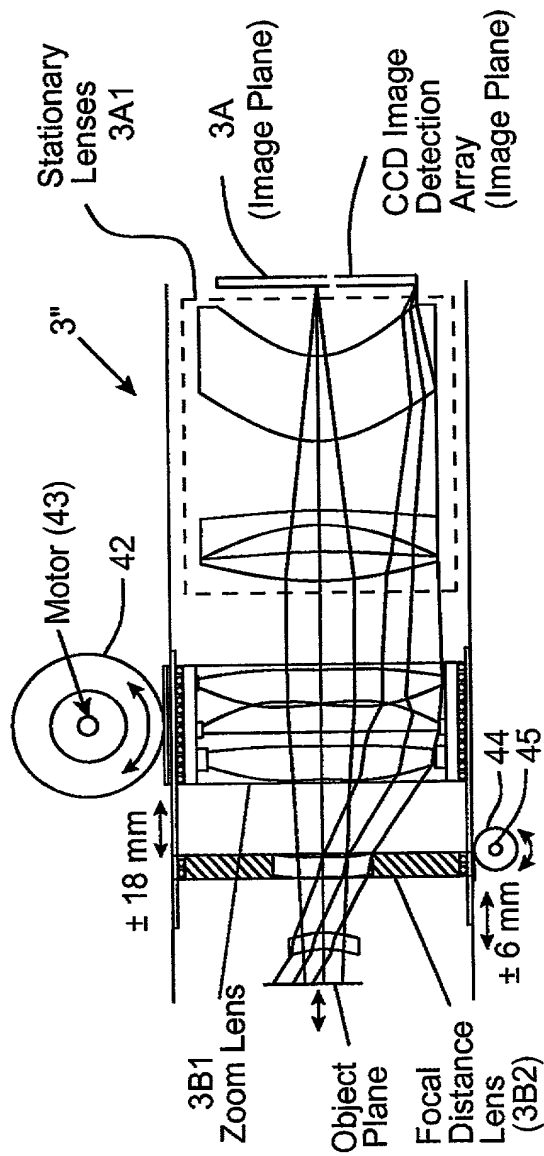


FIG. 3D

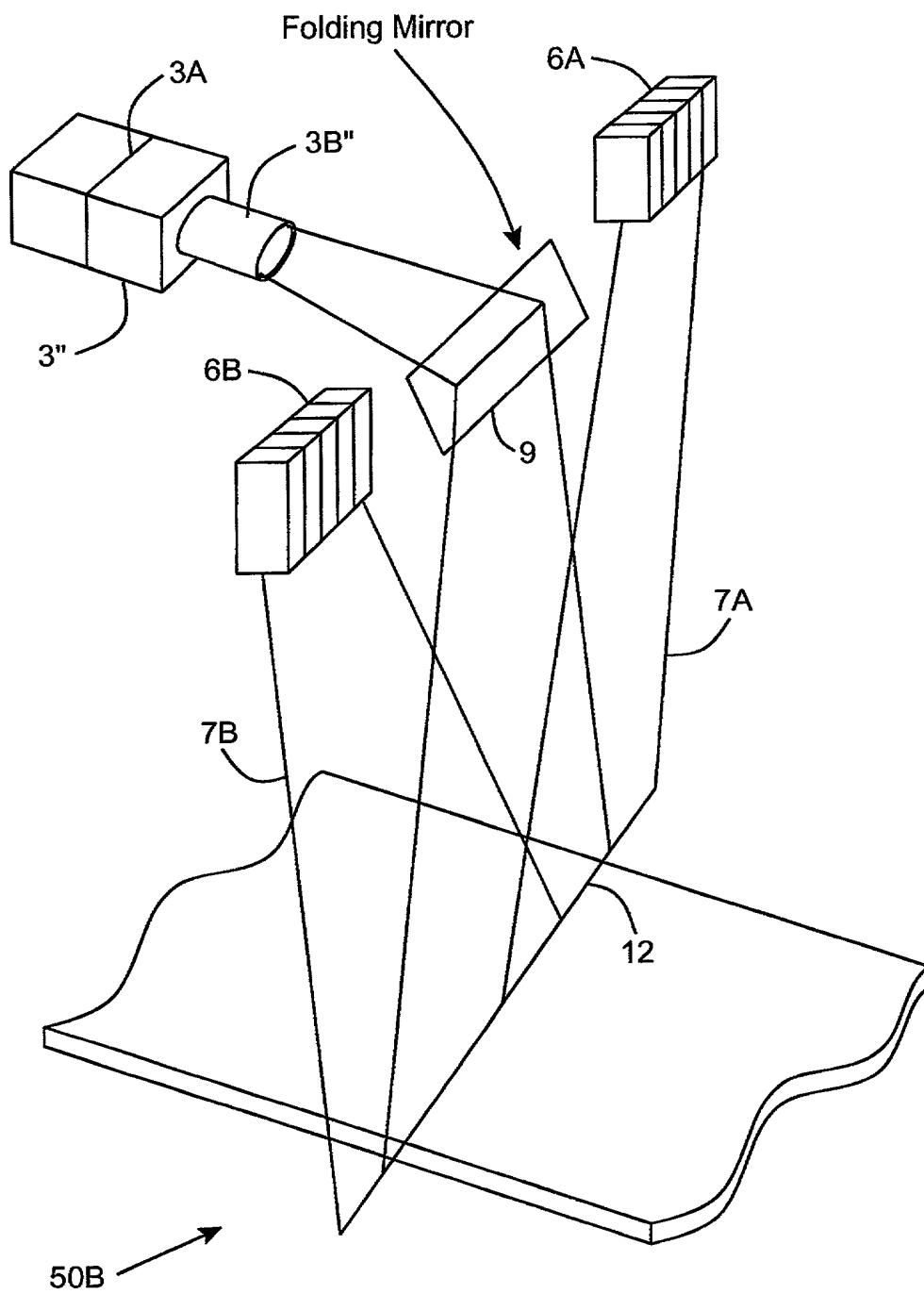


FIG. 3E1

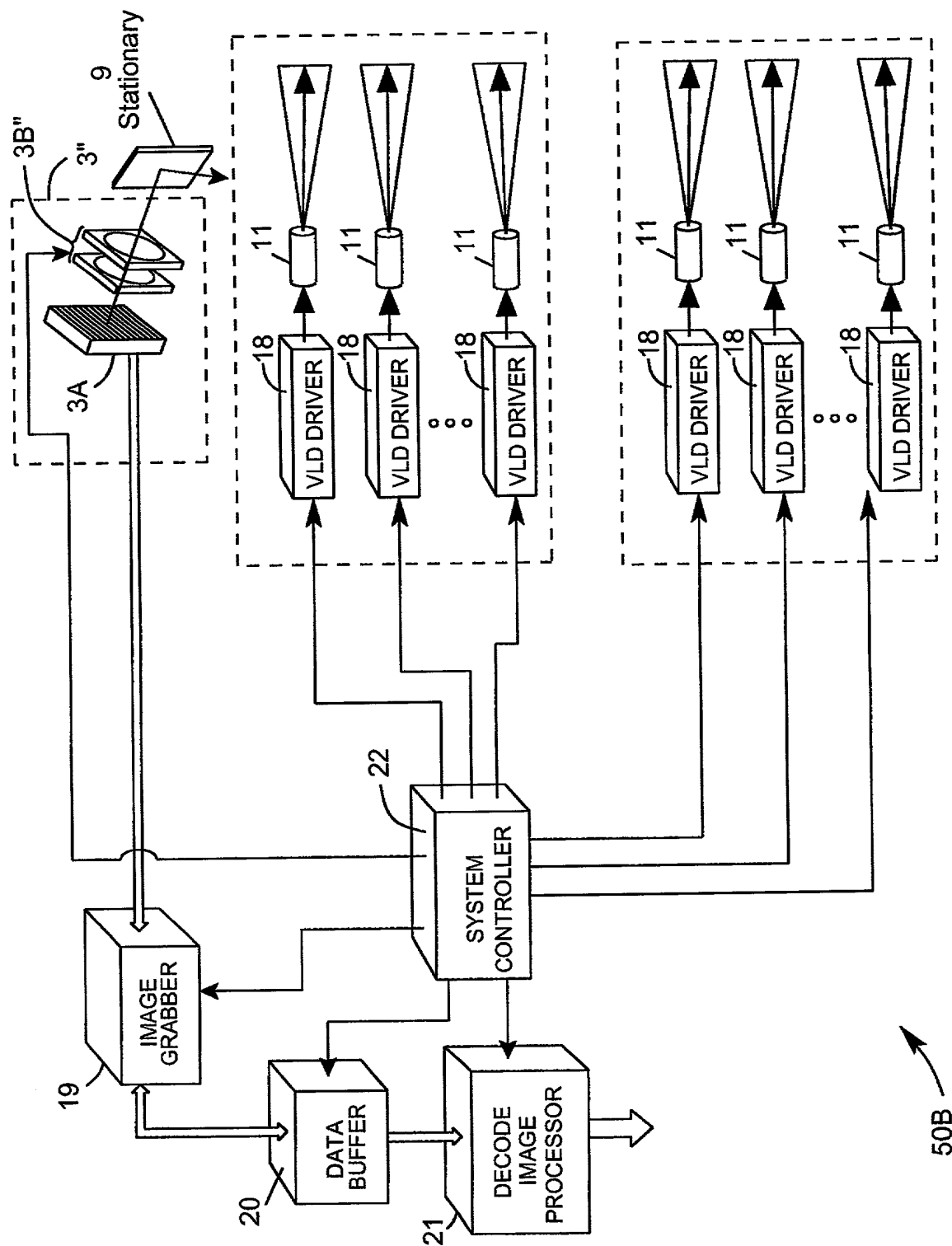


FIG. 3E2

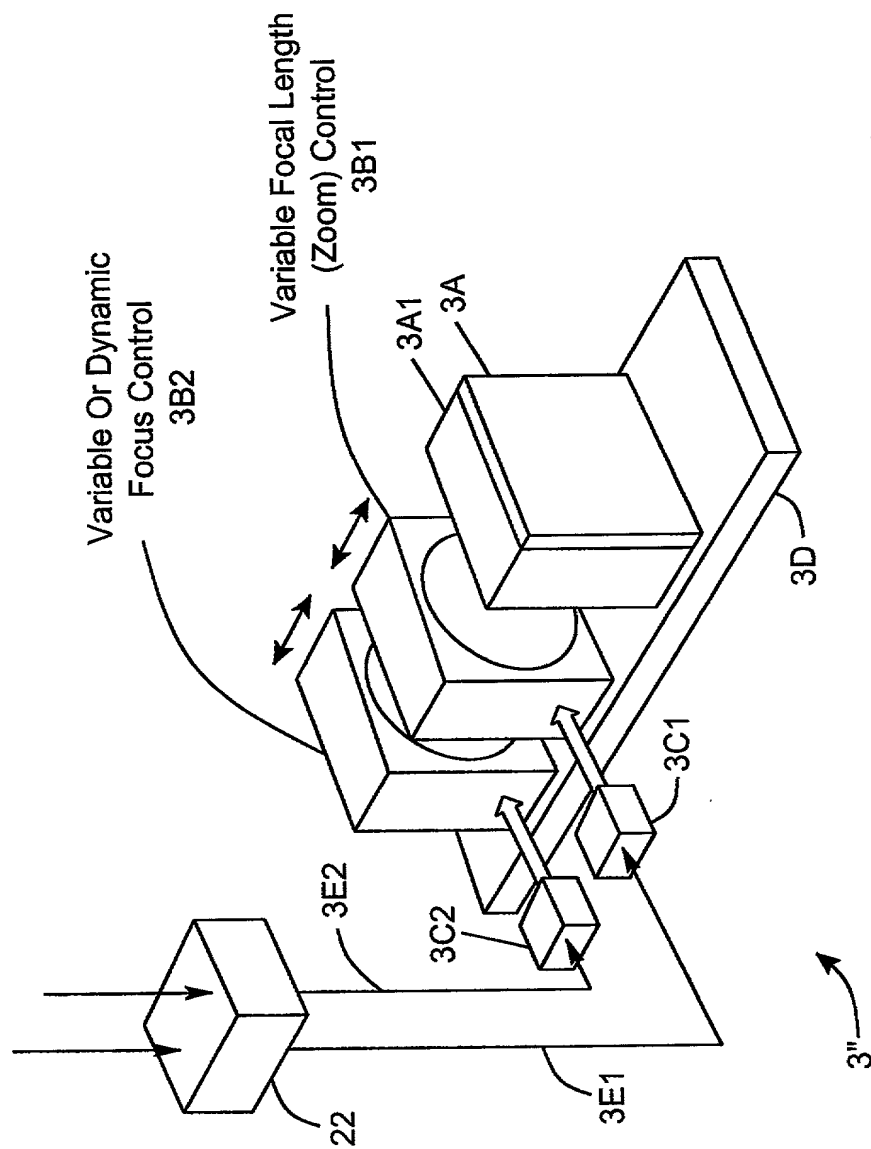


FIG. 3E3

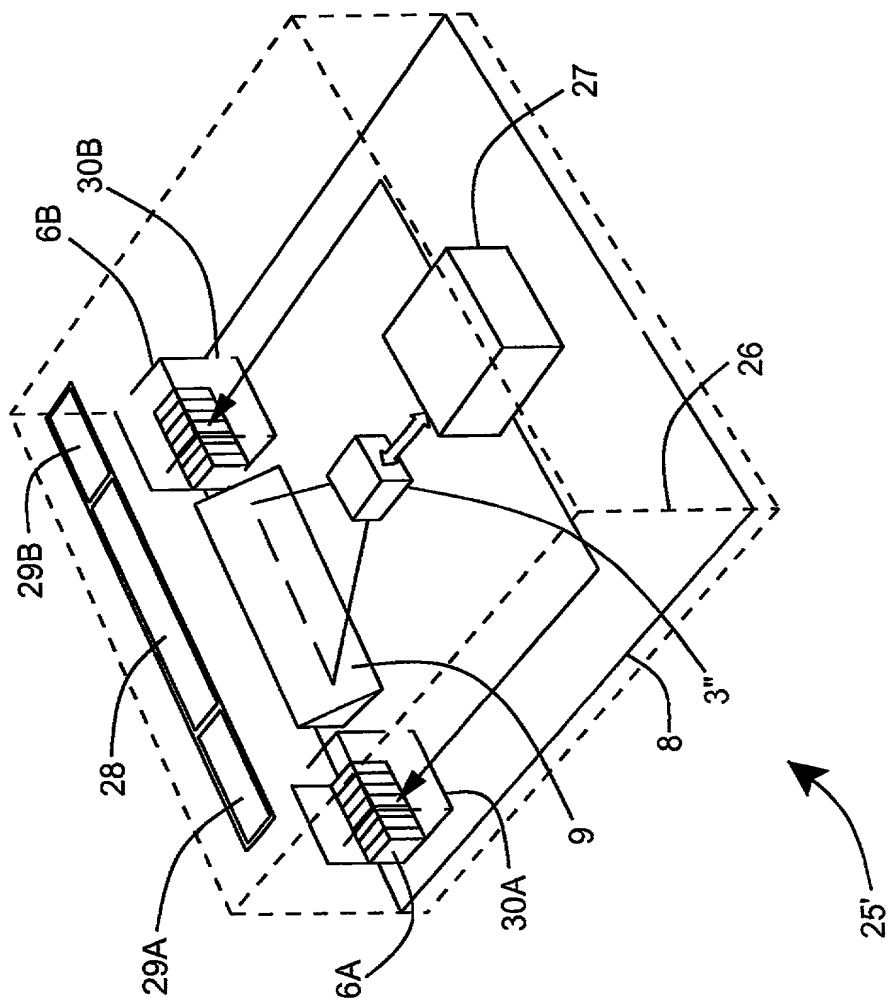


FIG. 3E4

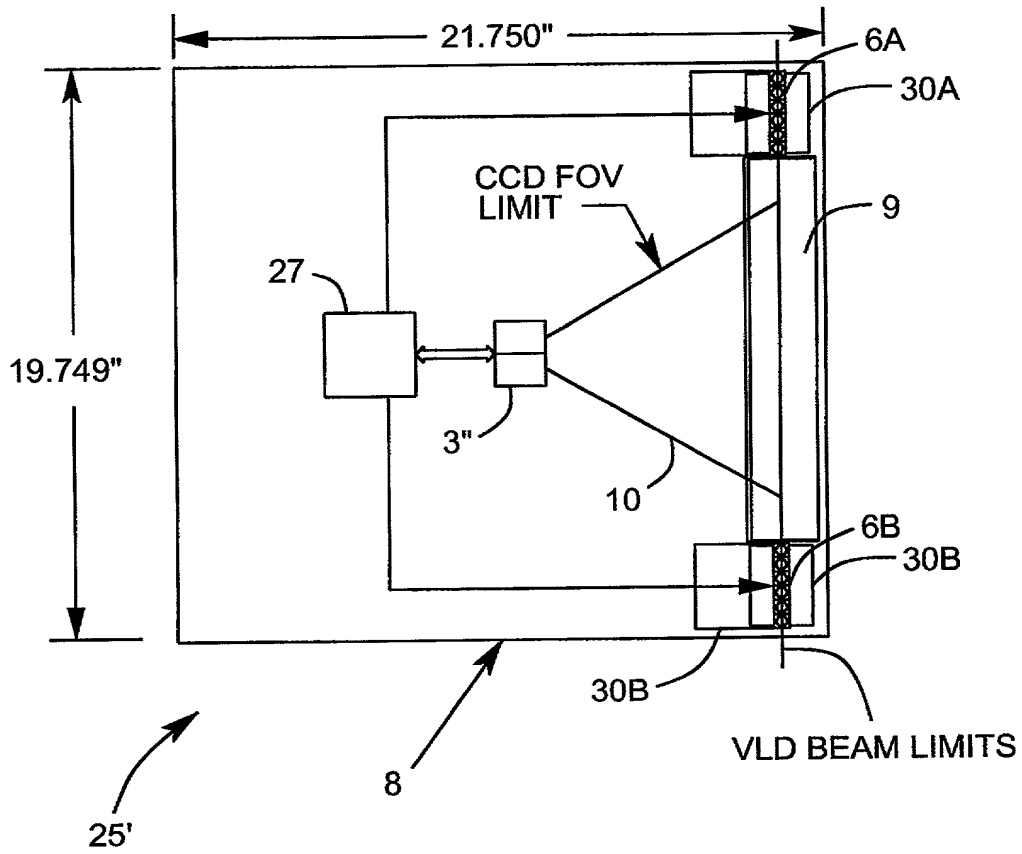


FIG. 3E5

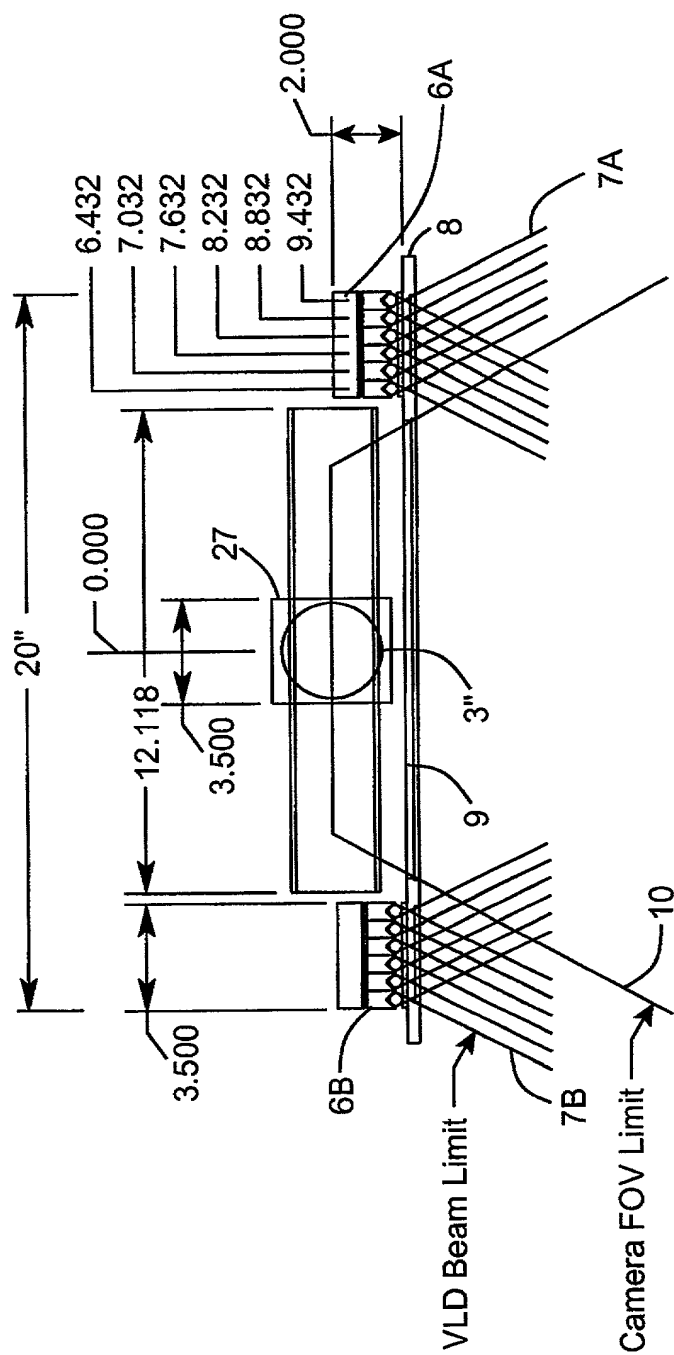


FIG. 3E6

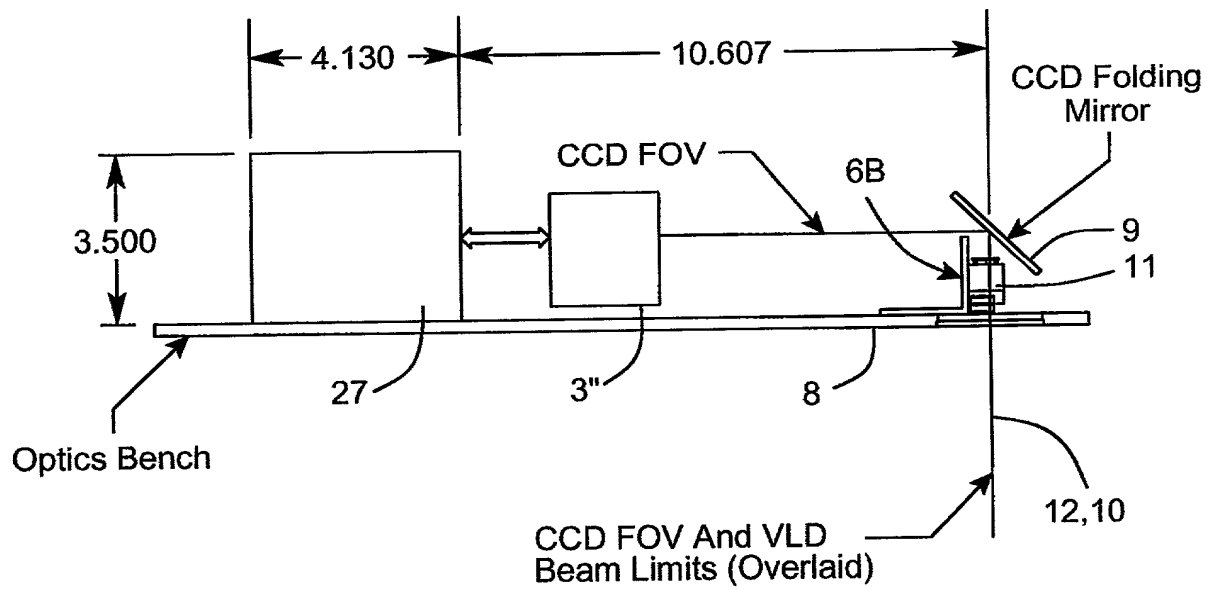


FIG. 3E7

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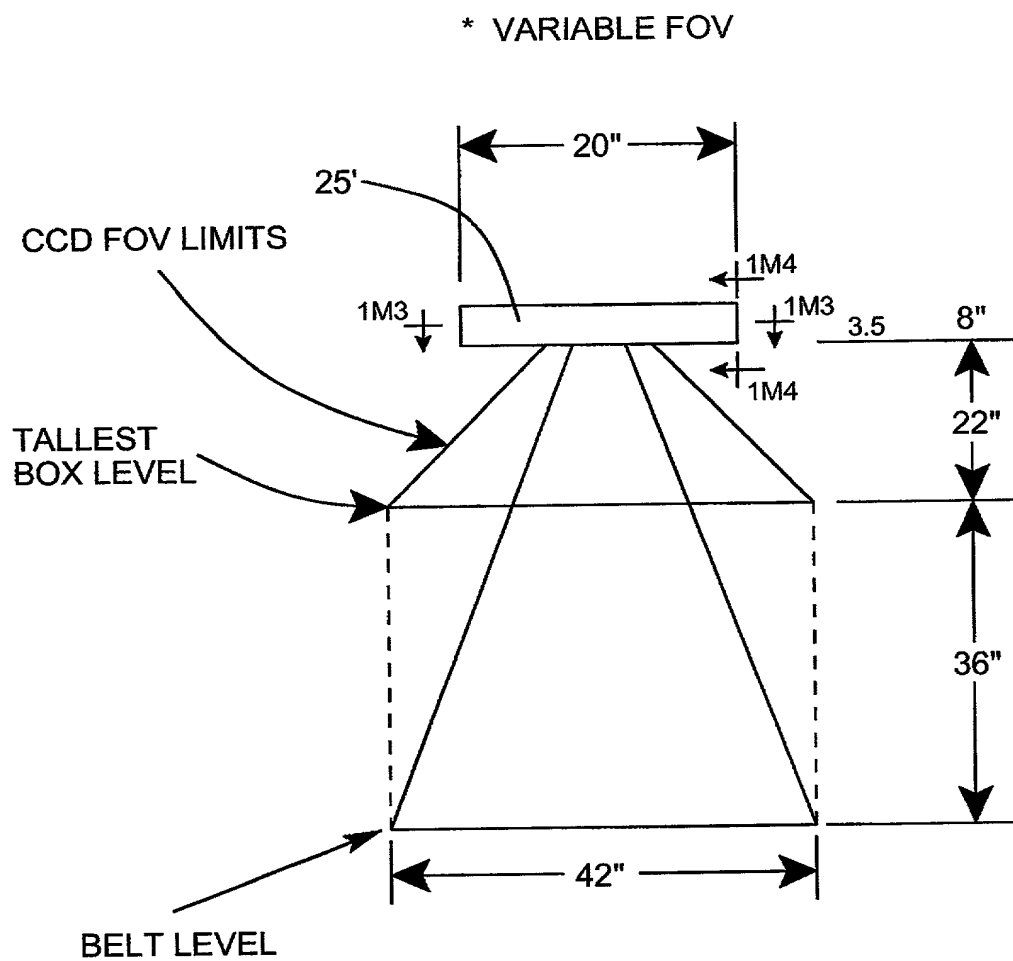


FIG. 3E8

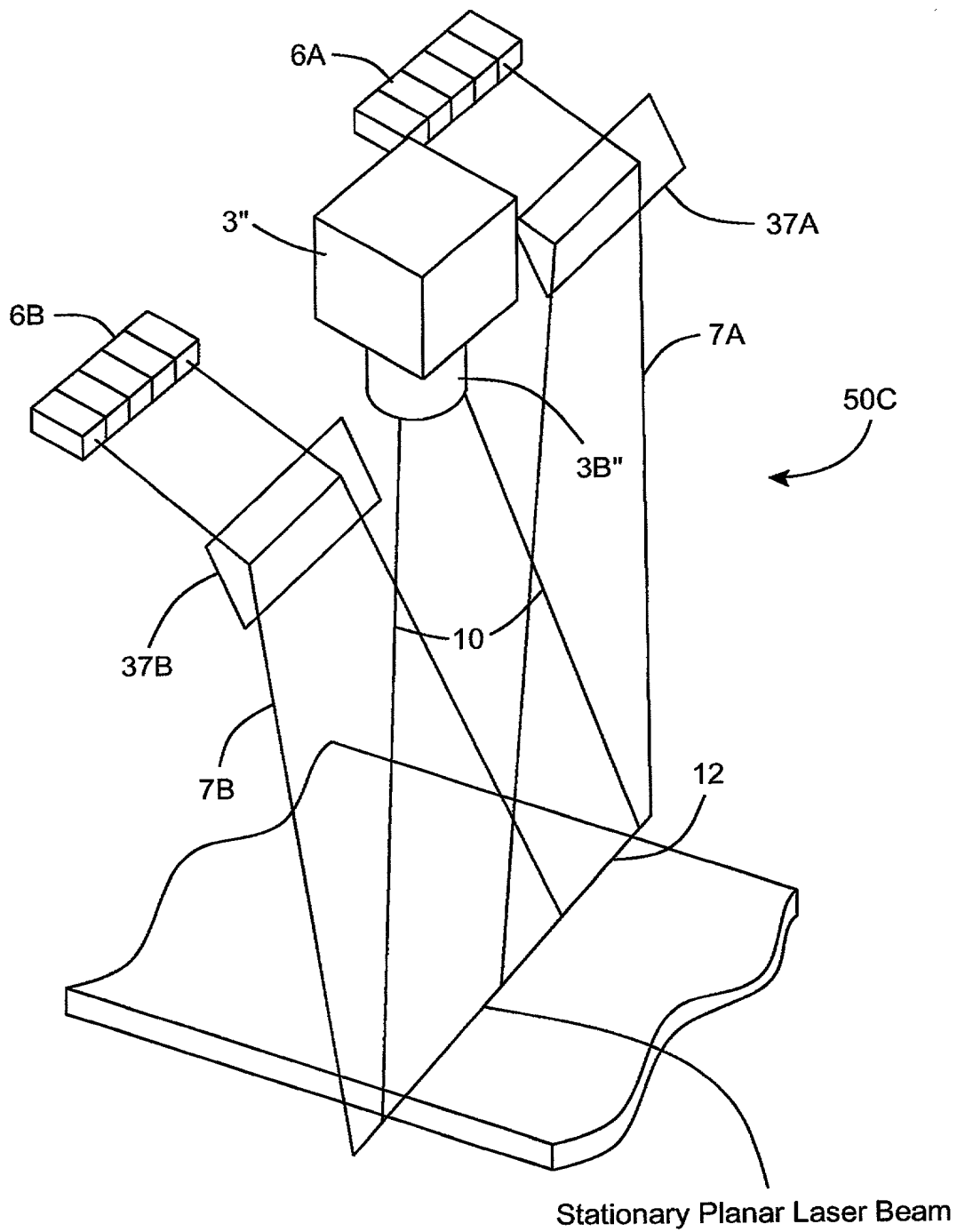


FIG. 3F1

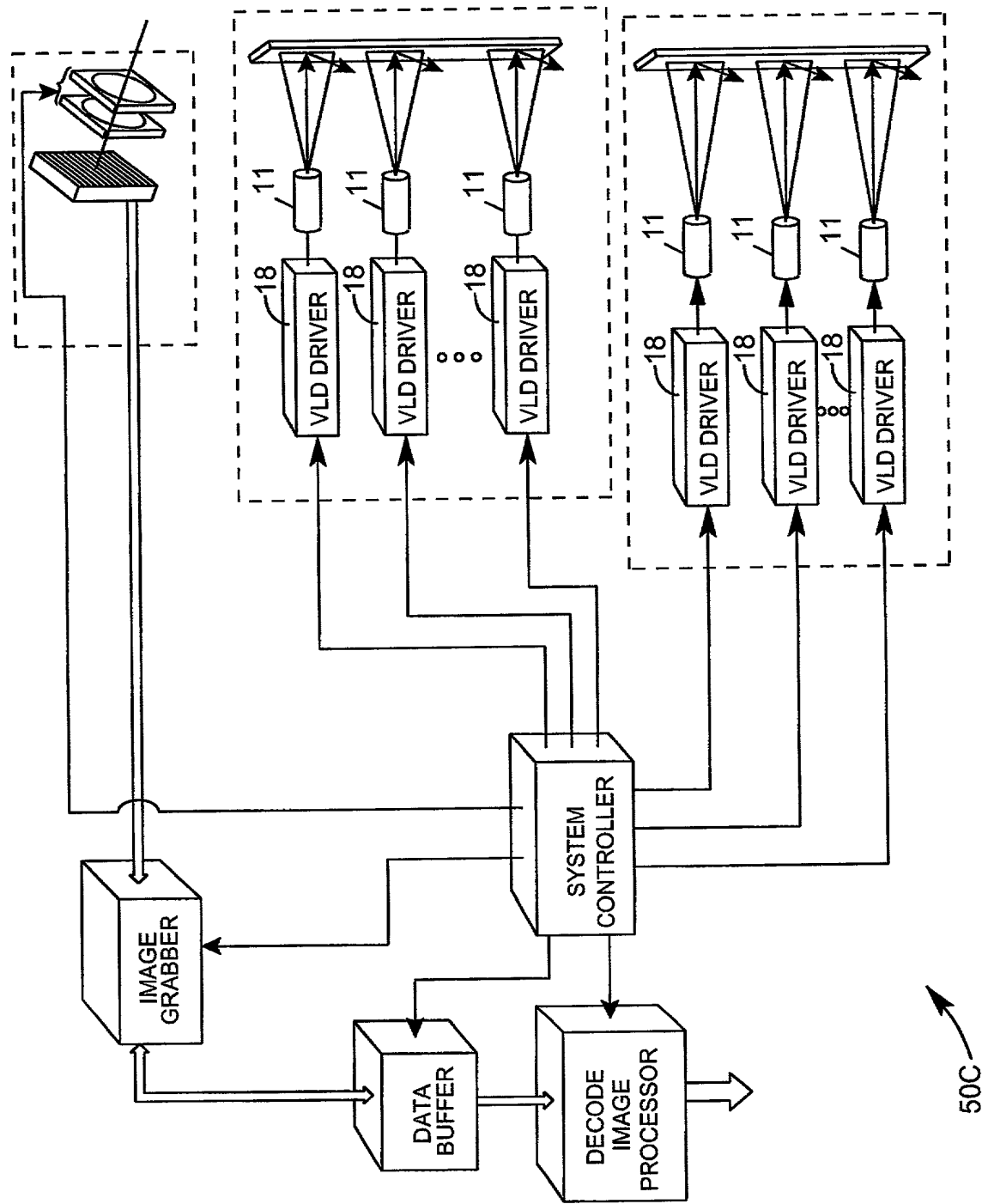


FIG. 3F2

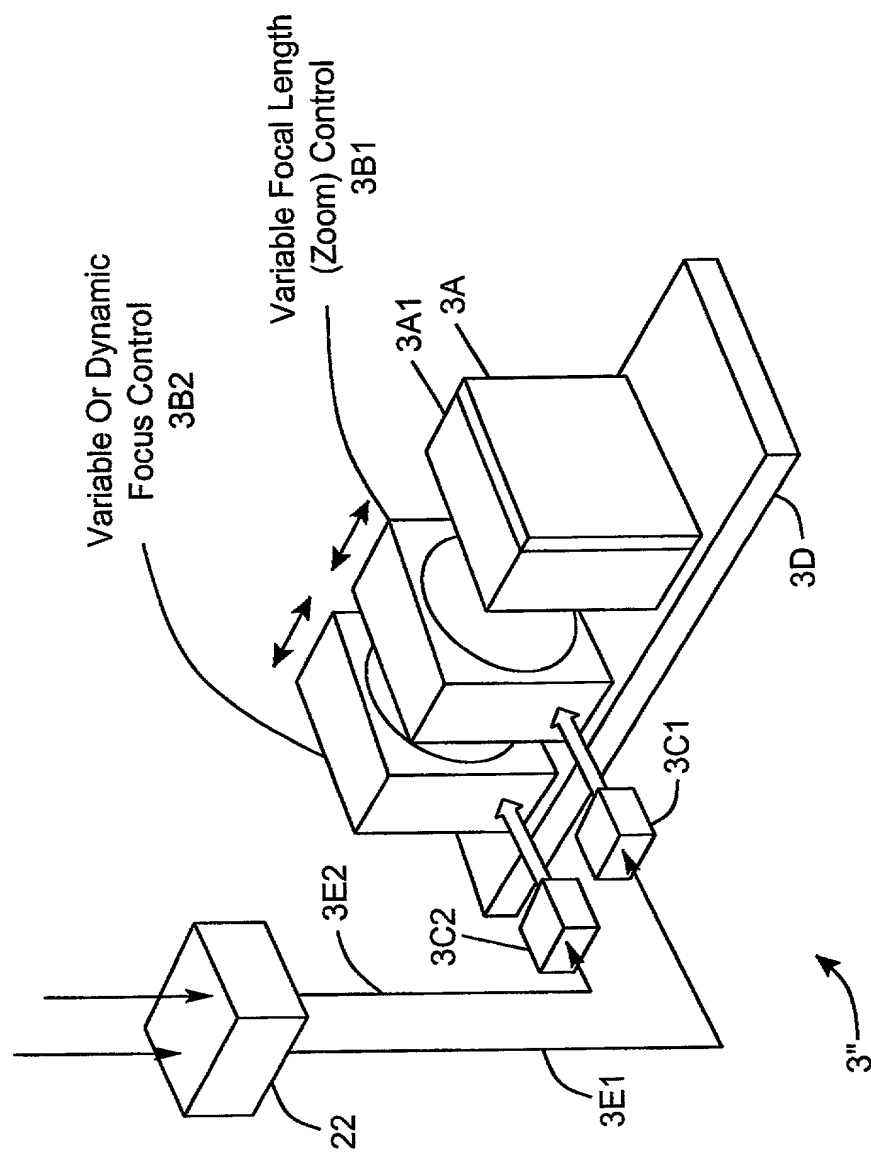


FIG. 3F3

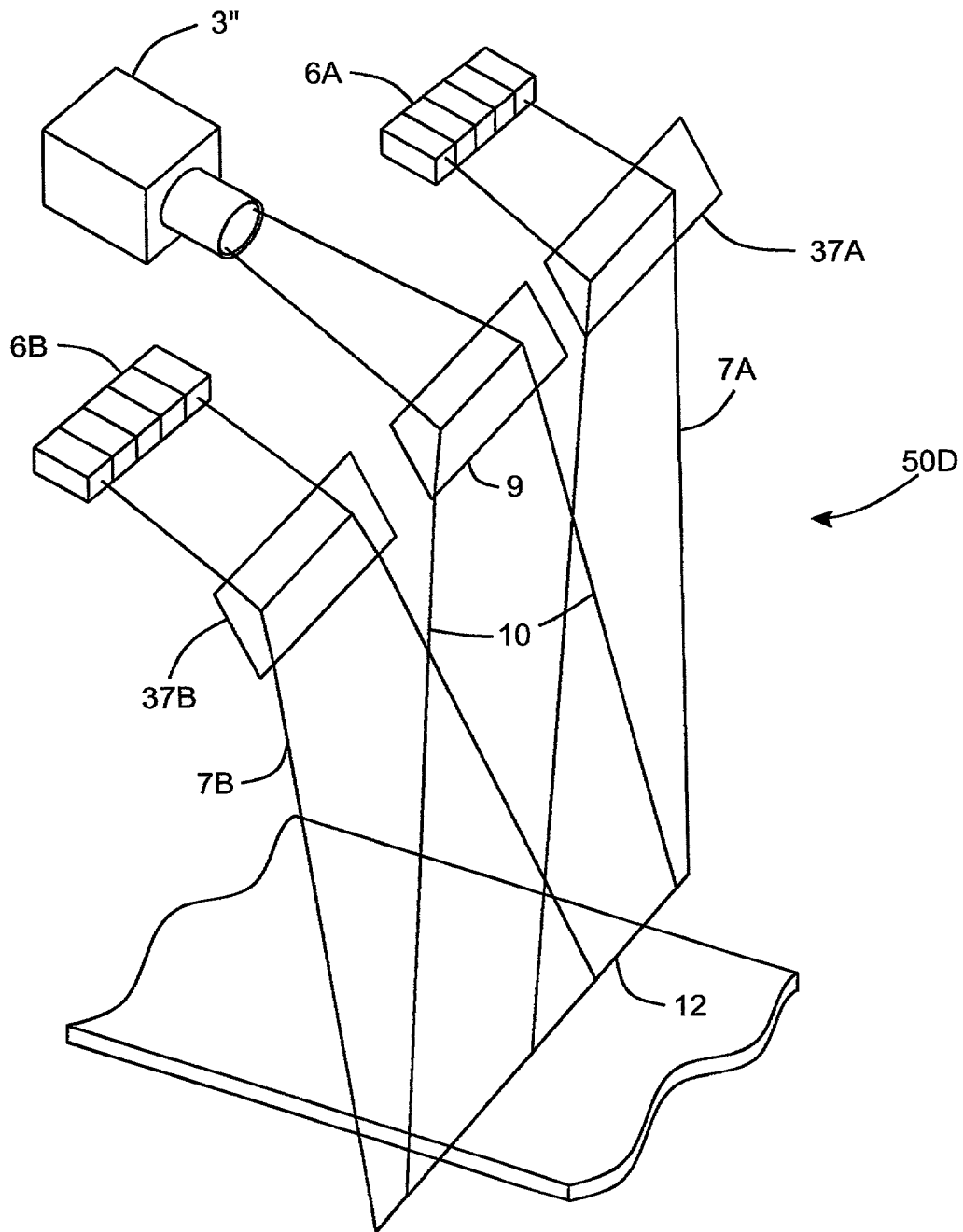


FIG. 3G1

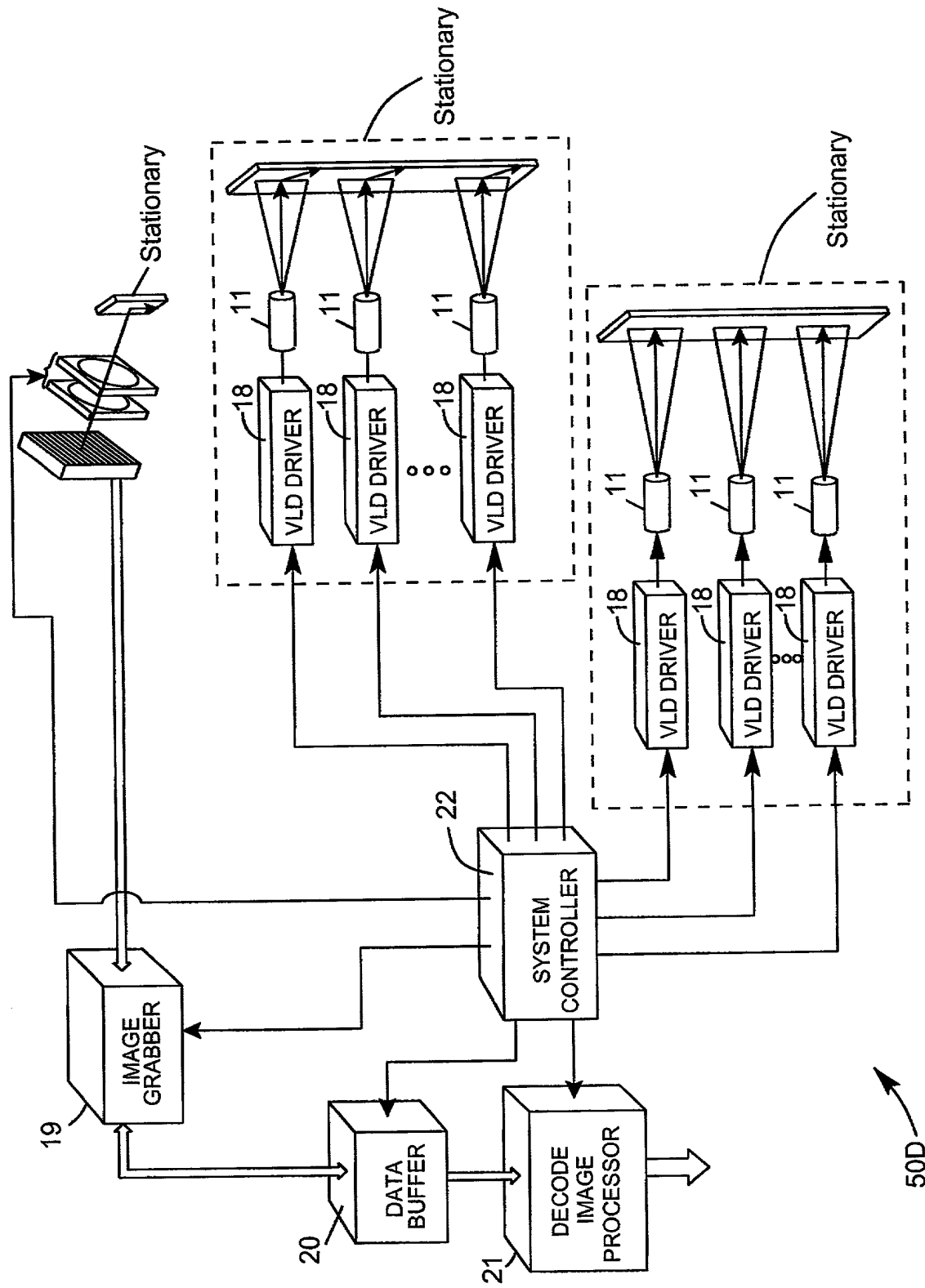


FIG. 3G2

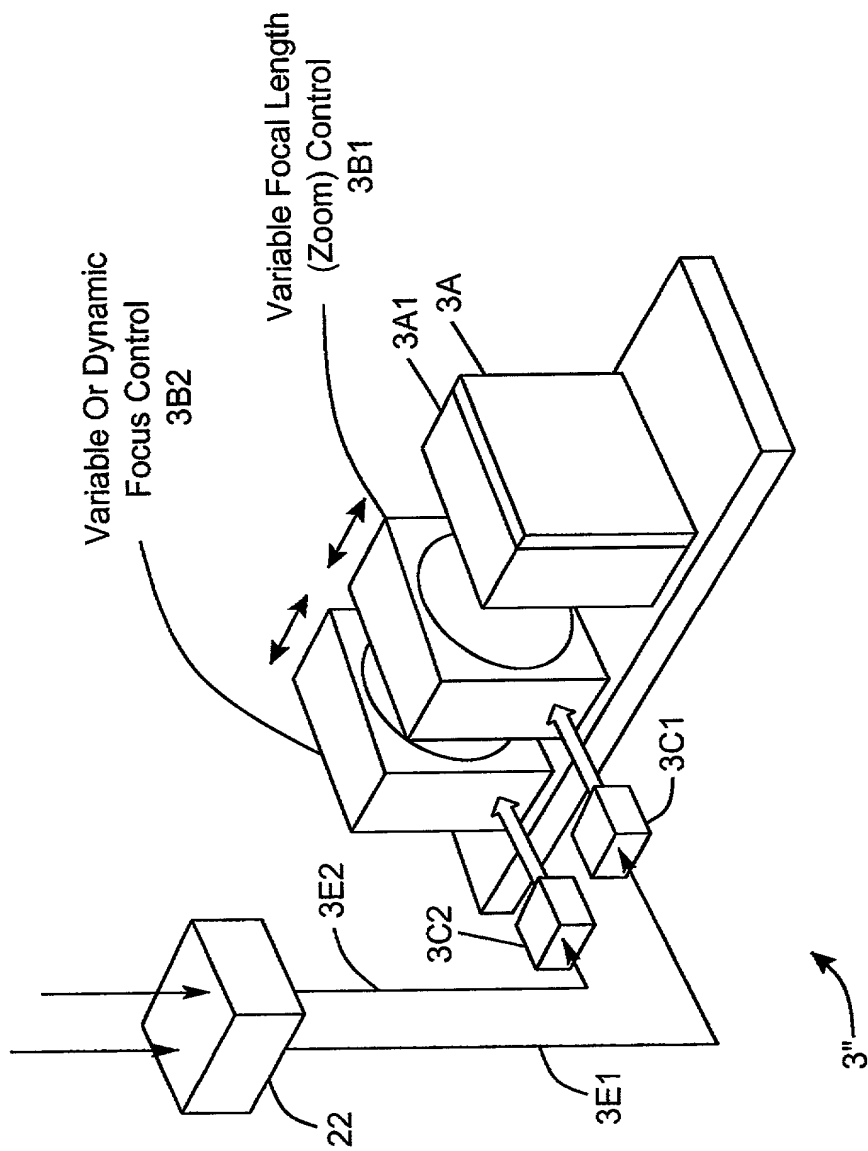


FIG. 3G3

20060401506500T

- Variable Focal Length Imaging Lens
- Variable Focal Distance

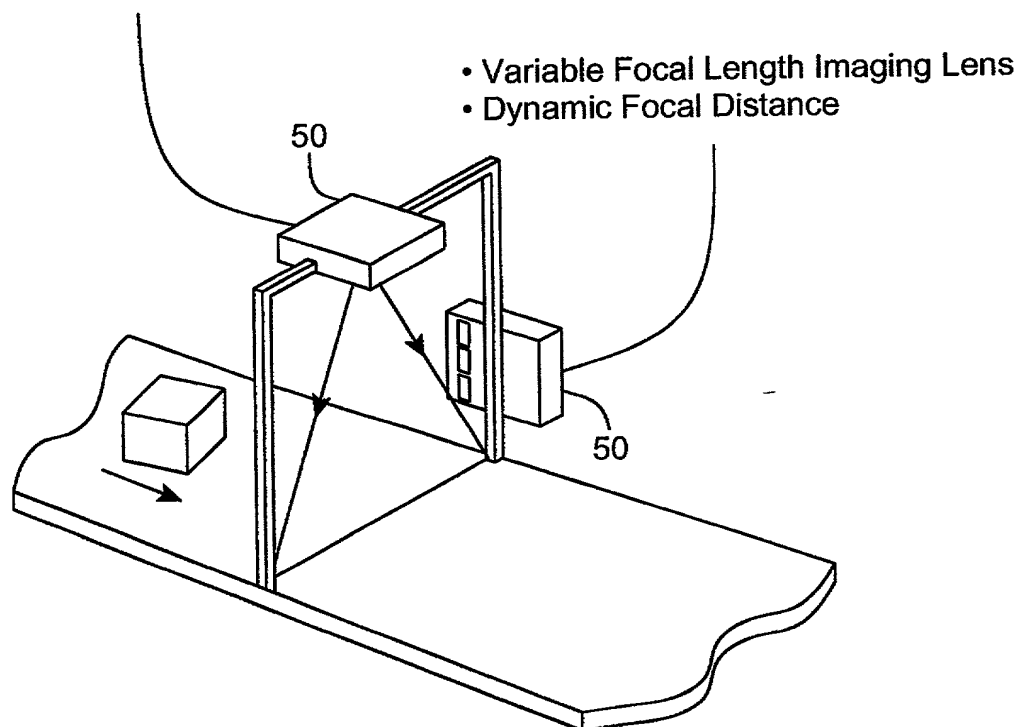


FIG. 3H

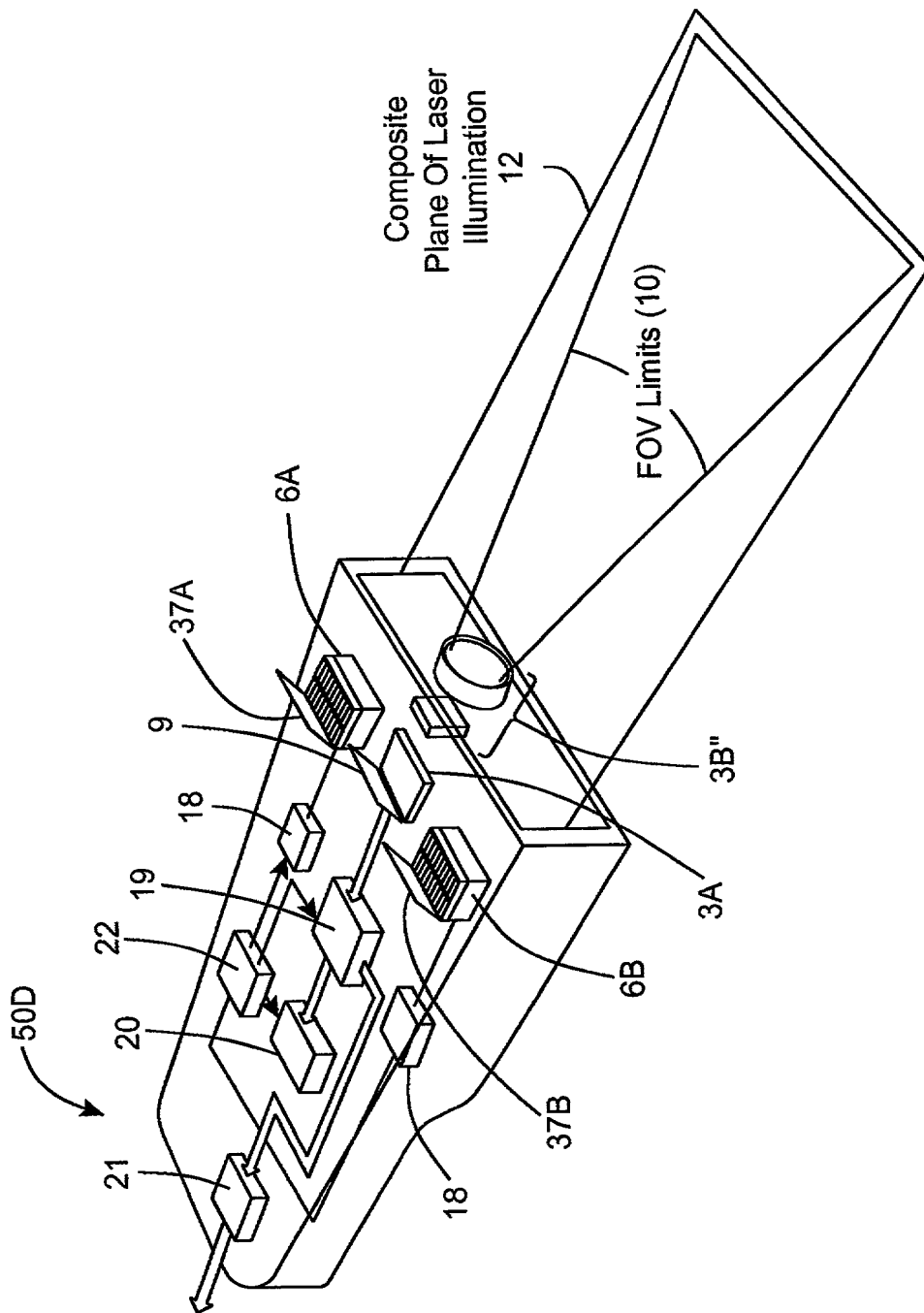


FIG. 3I

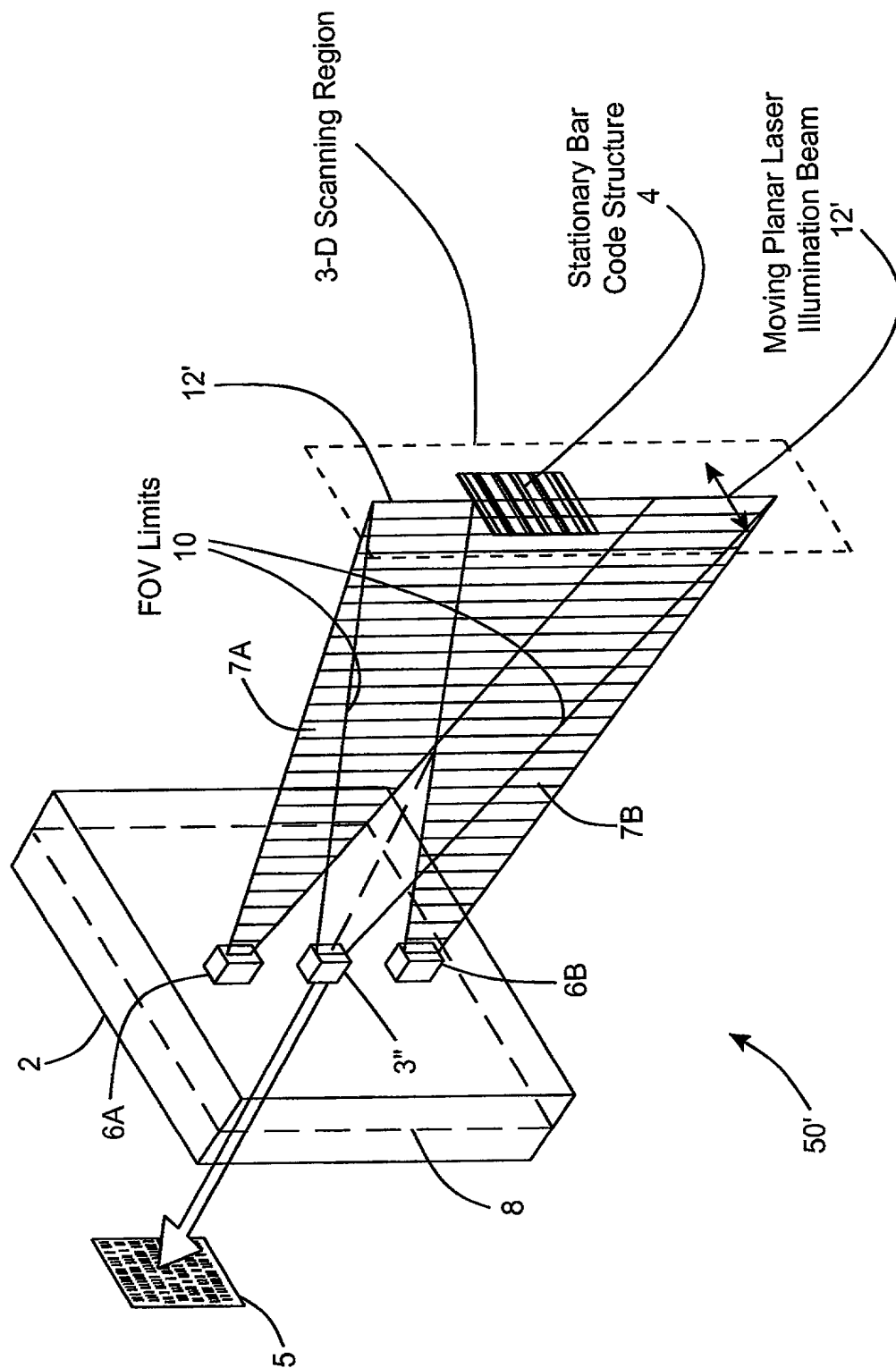
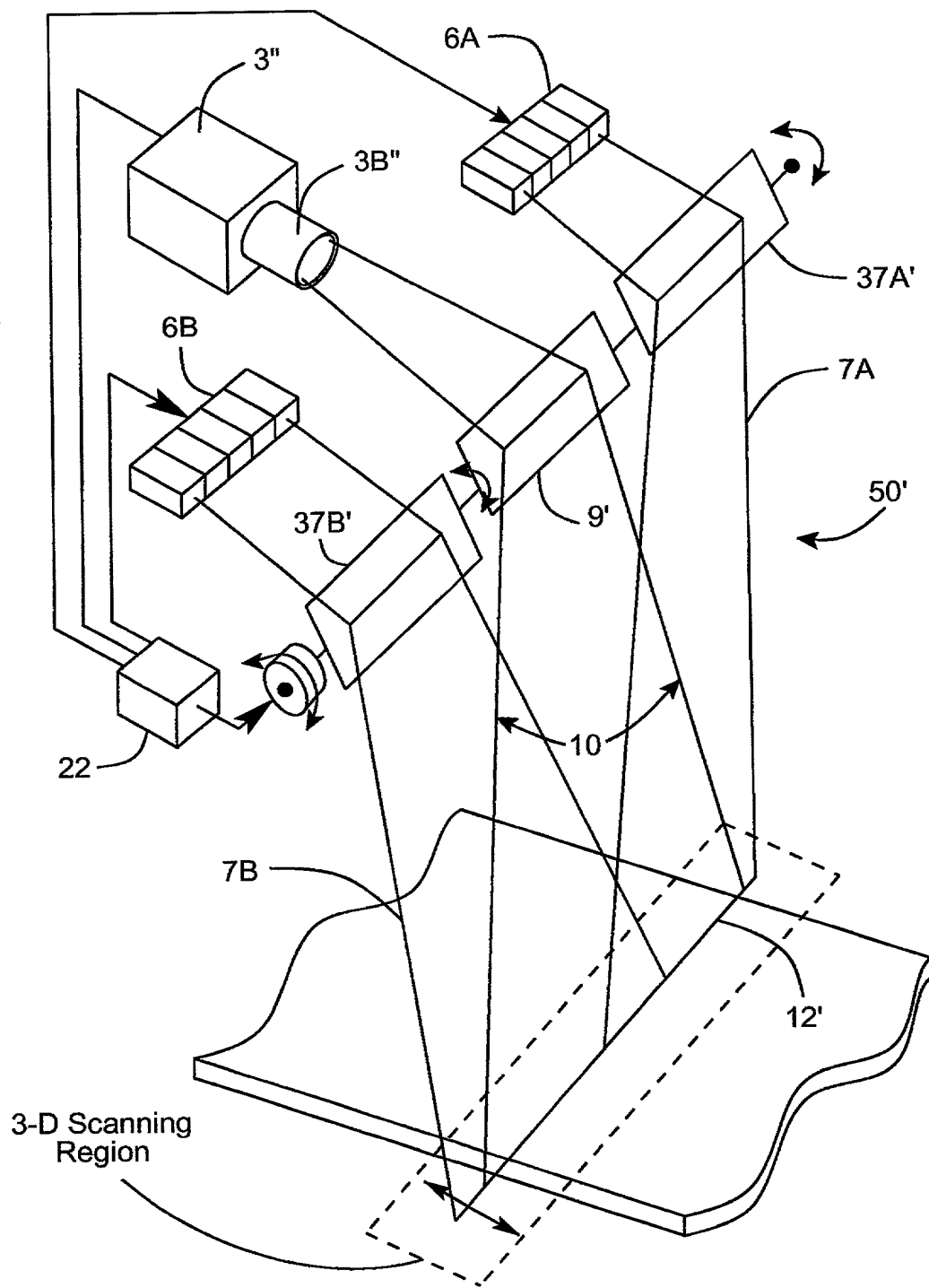


FIG. 3J1



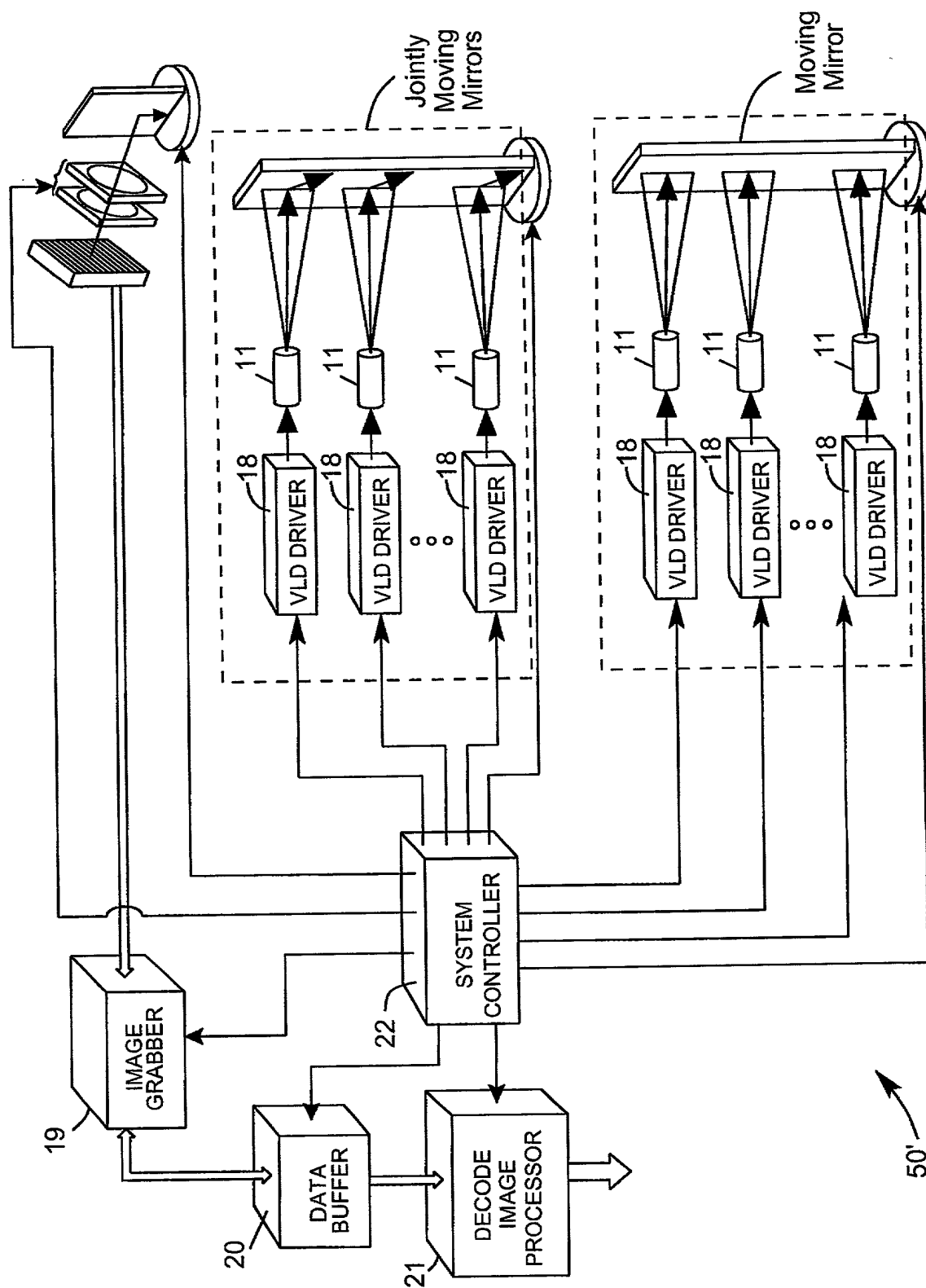


FIG. 3J3

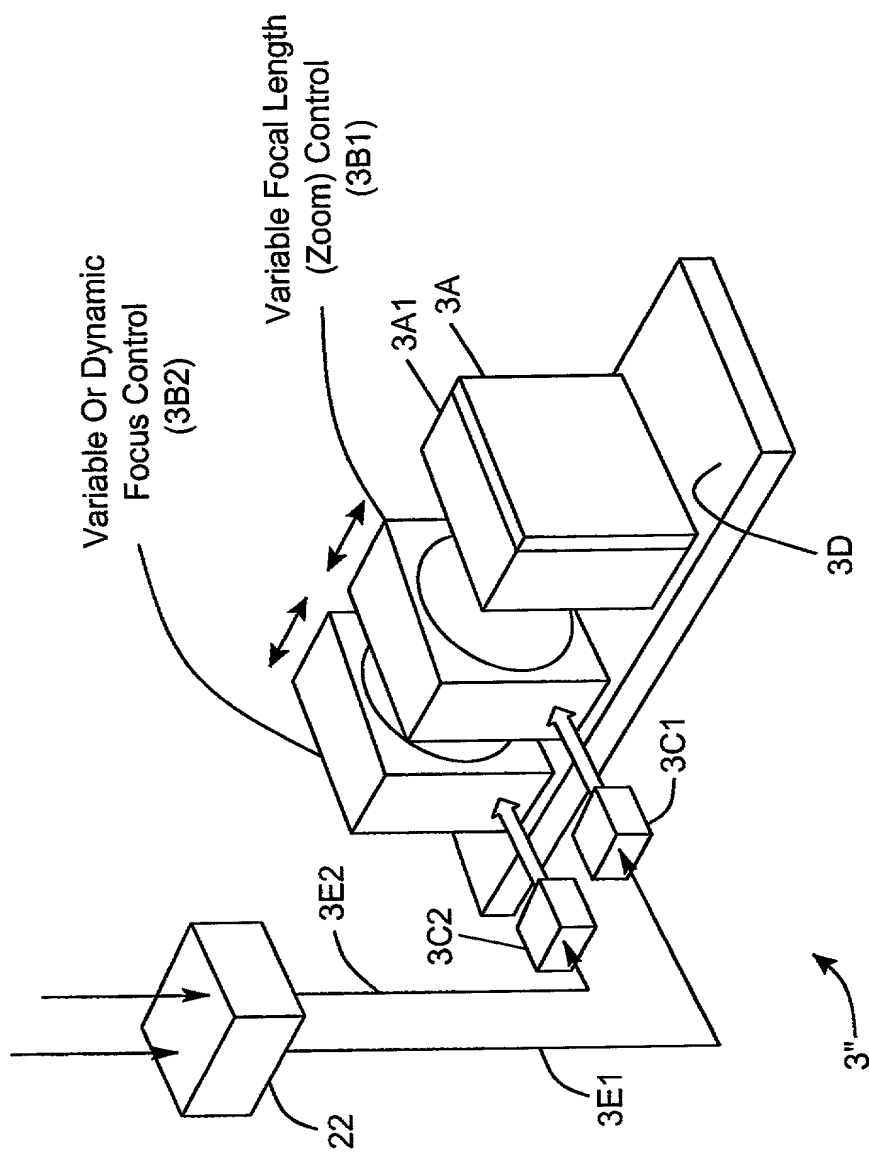
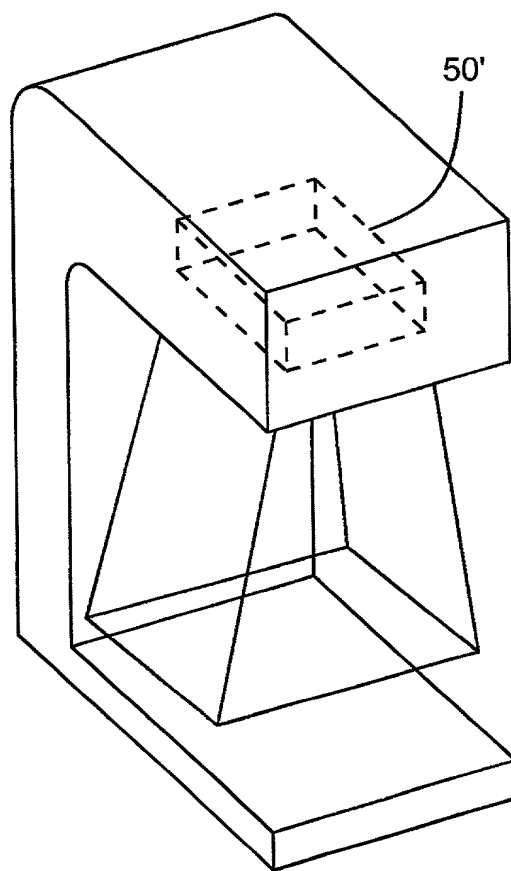


FIG. 3J4



2-D Hold-under Scanner

FIG. 3J6

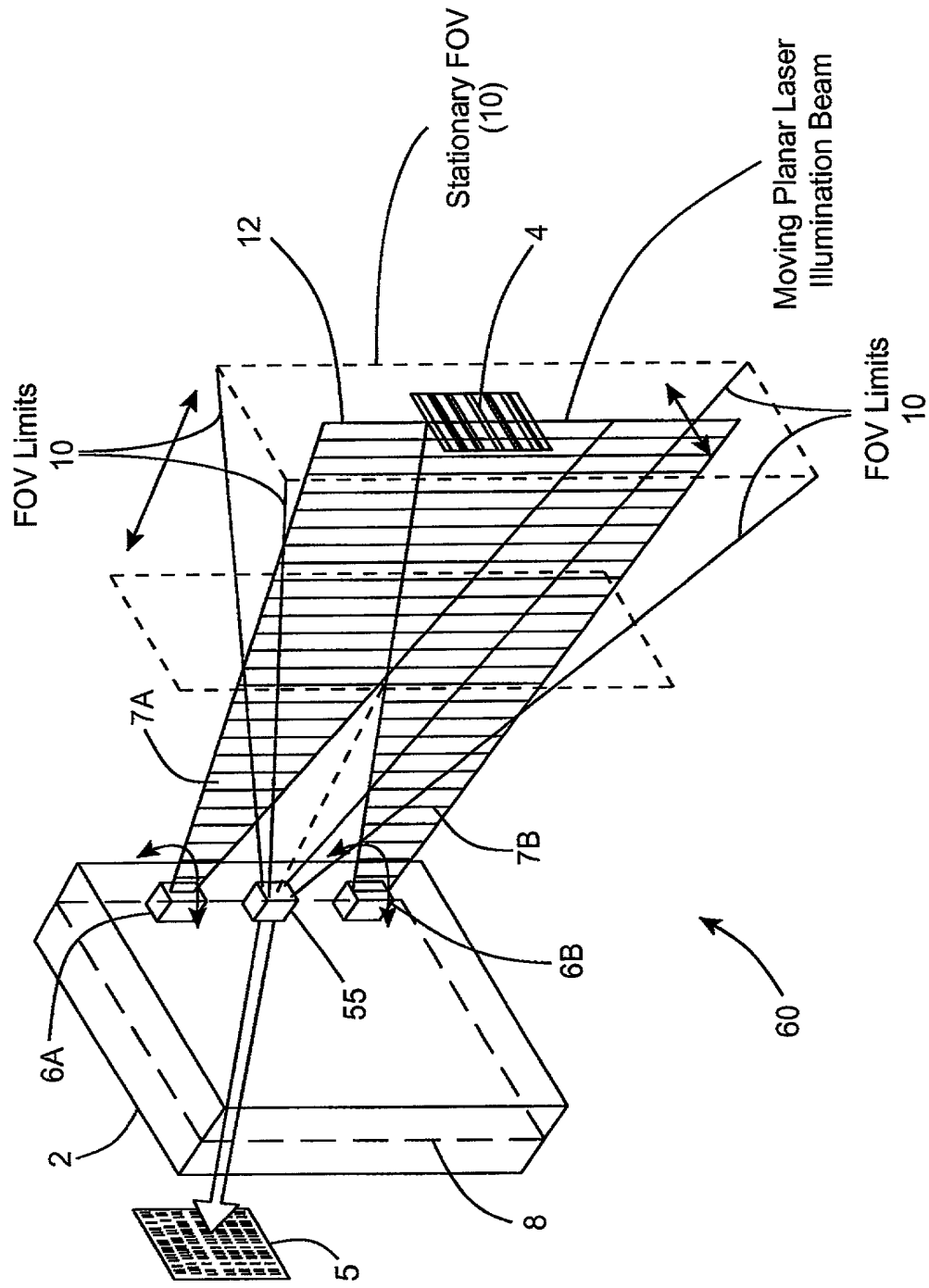


FIG. 4A

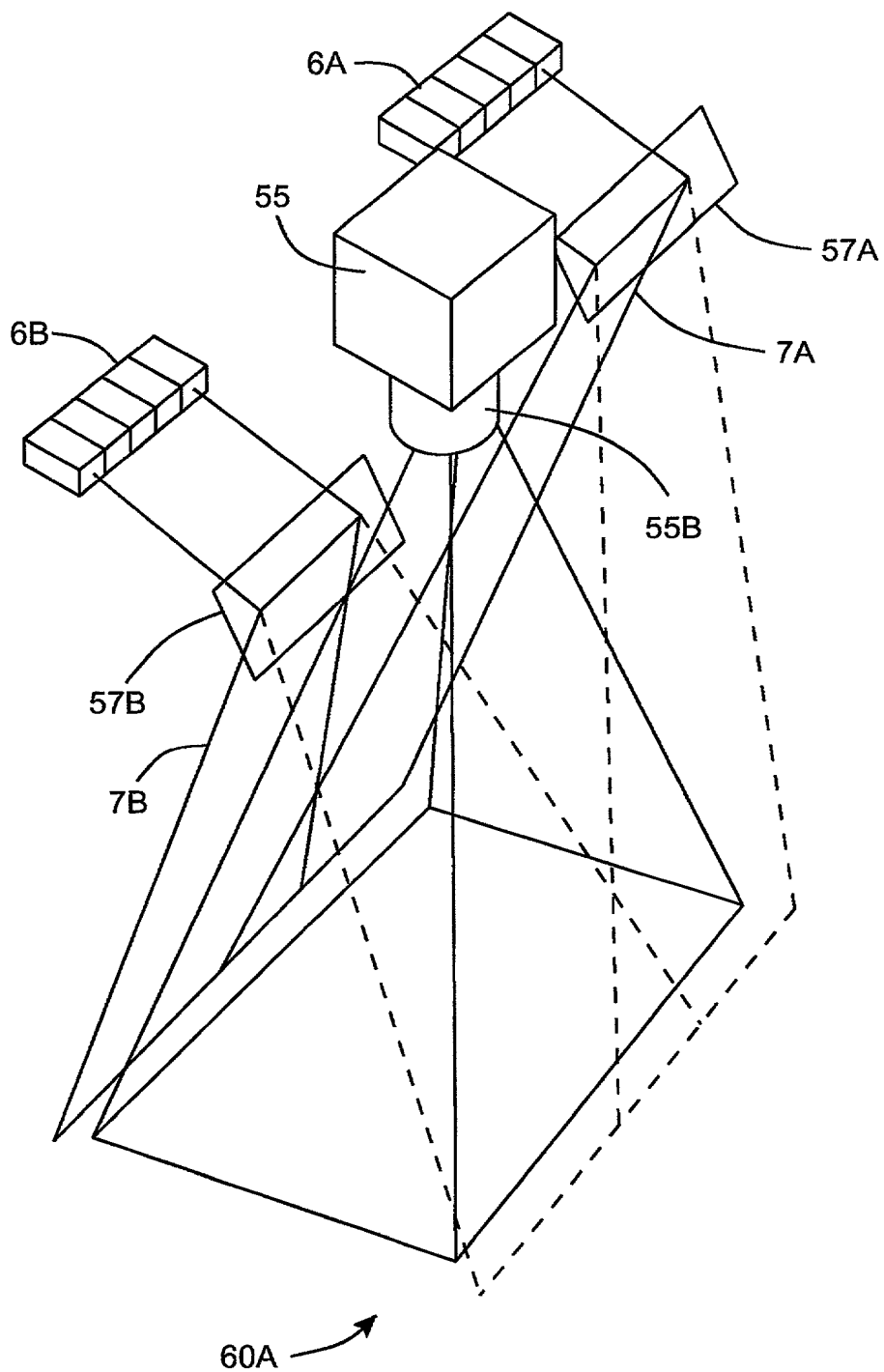


FIG. 4B1

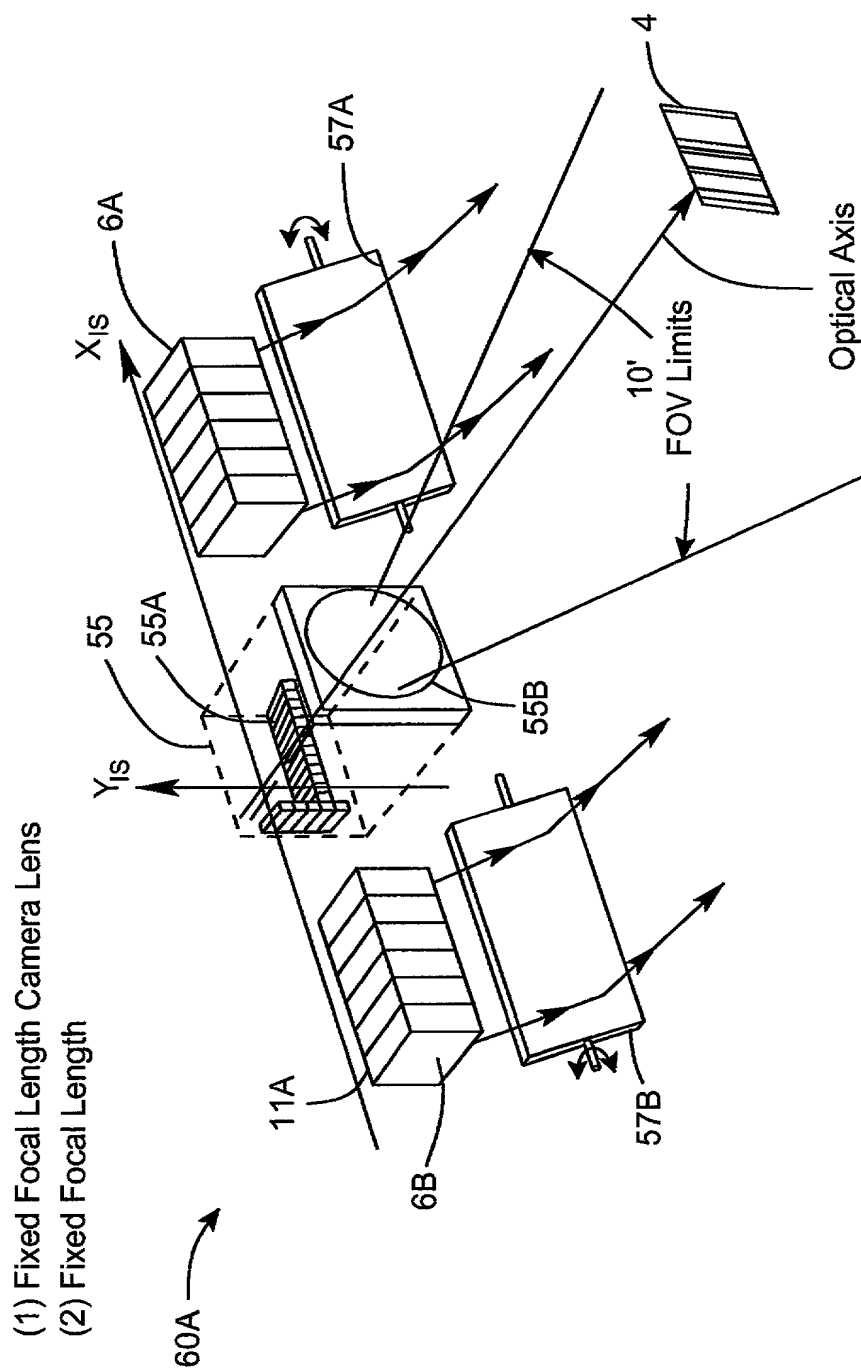
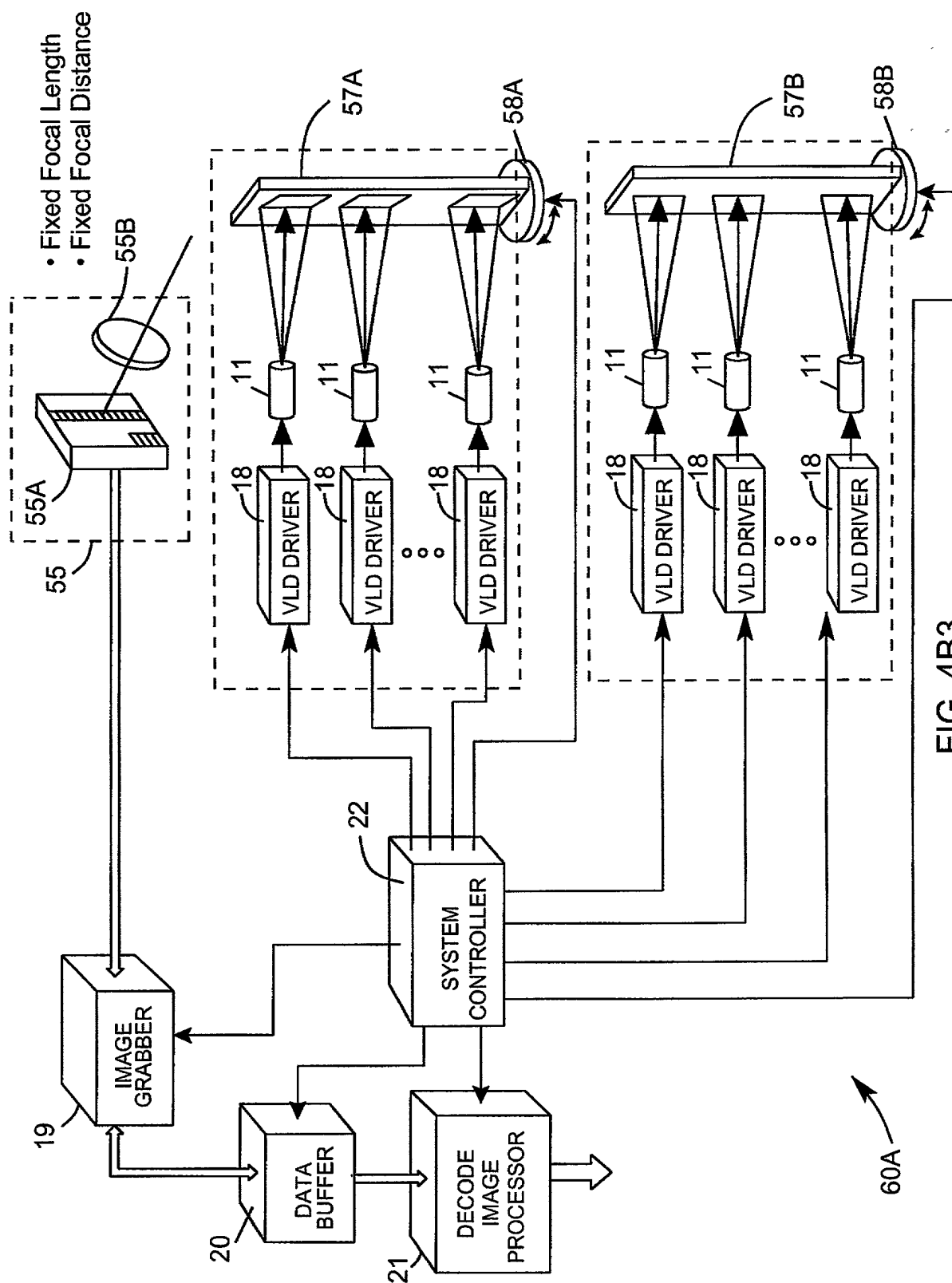


FIG. 4B2



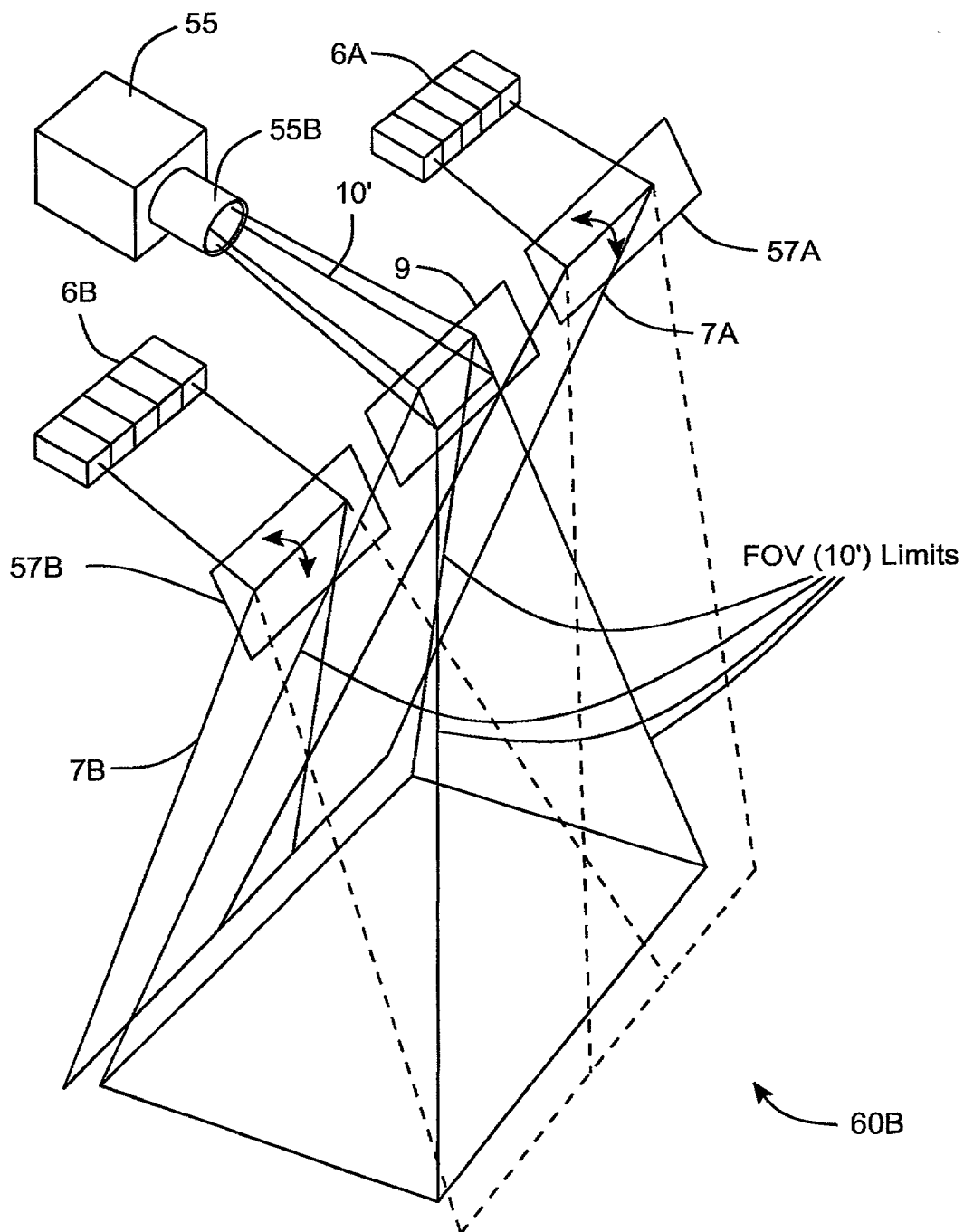


FIG. 4C1

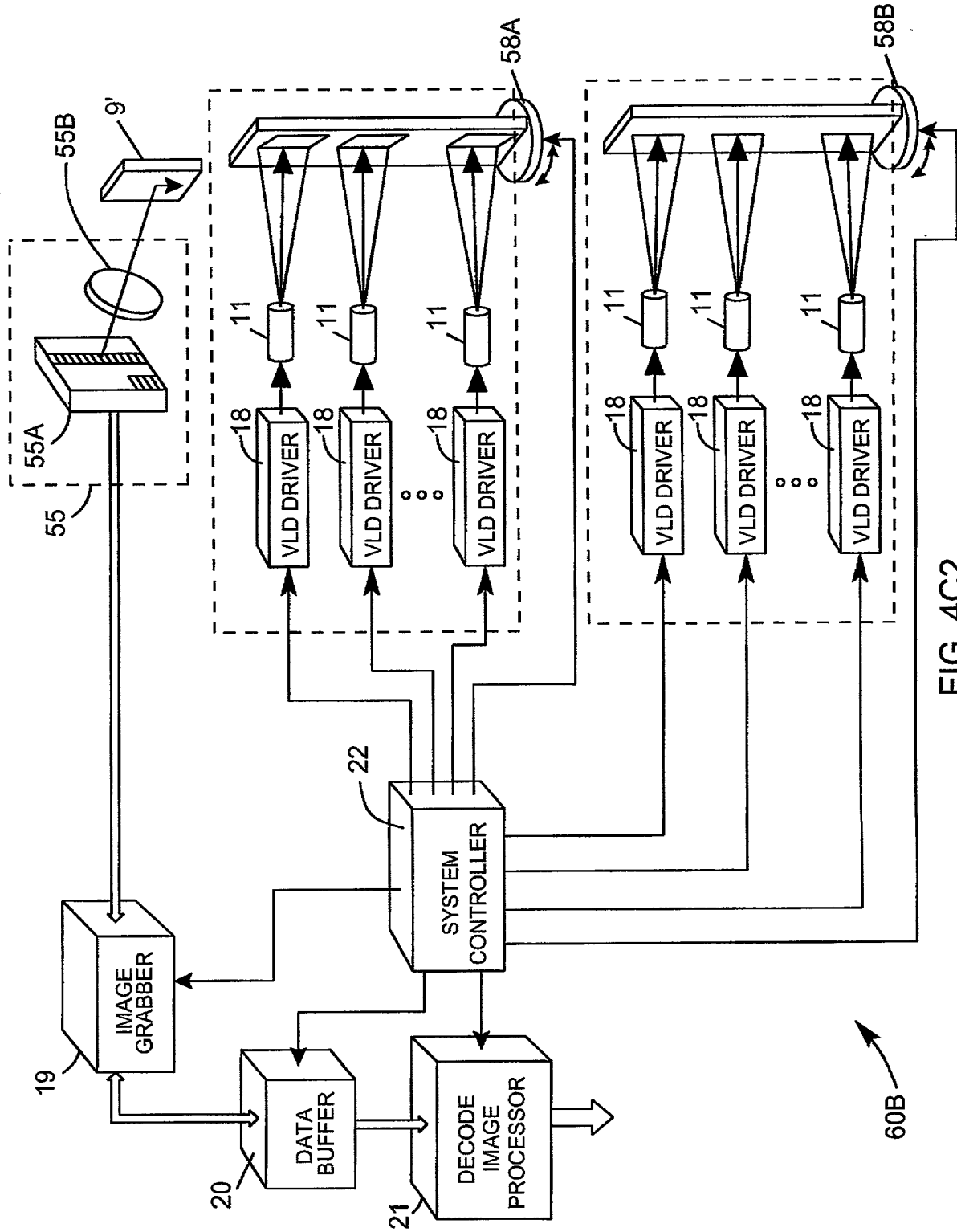
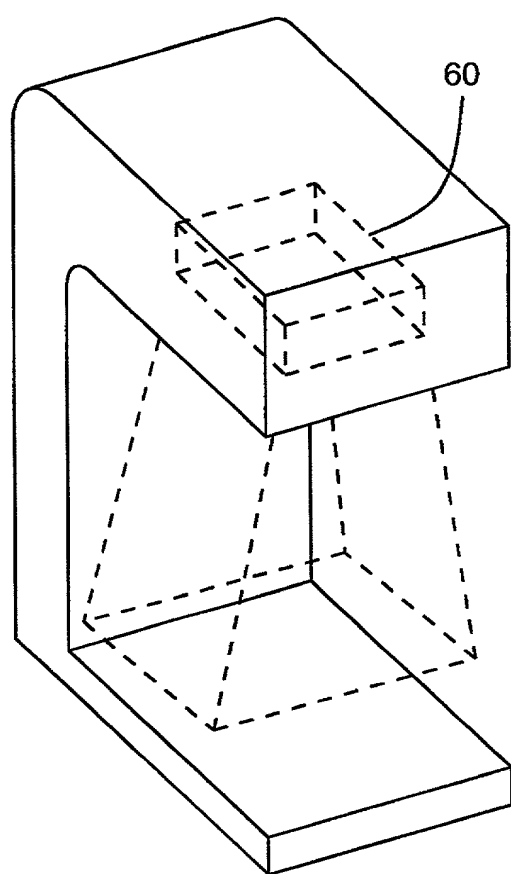


FIG. 4C2



2-D Hold-under Scanner

FIG. 4D

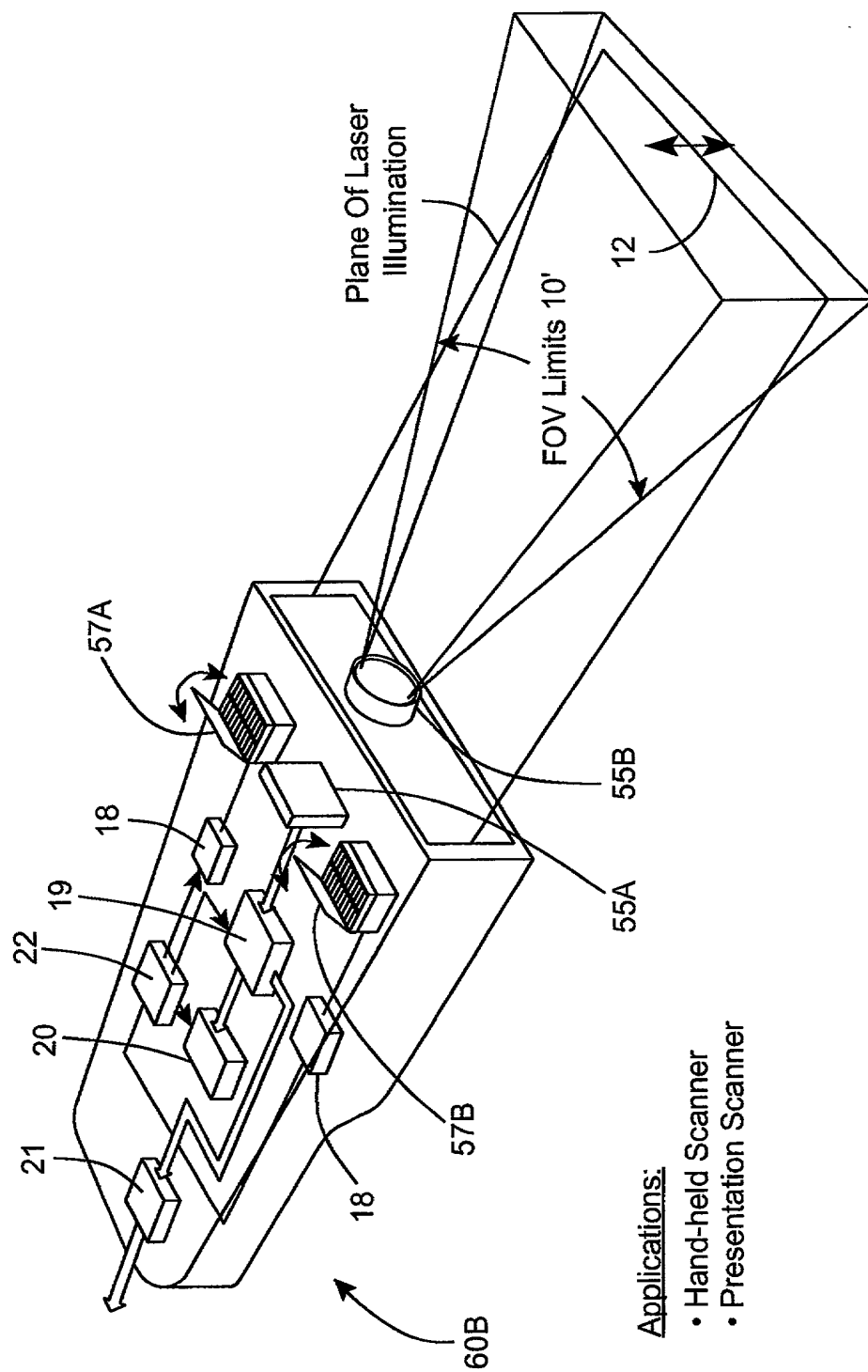


FIG. 4E

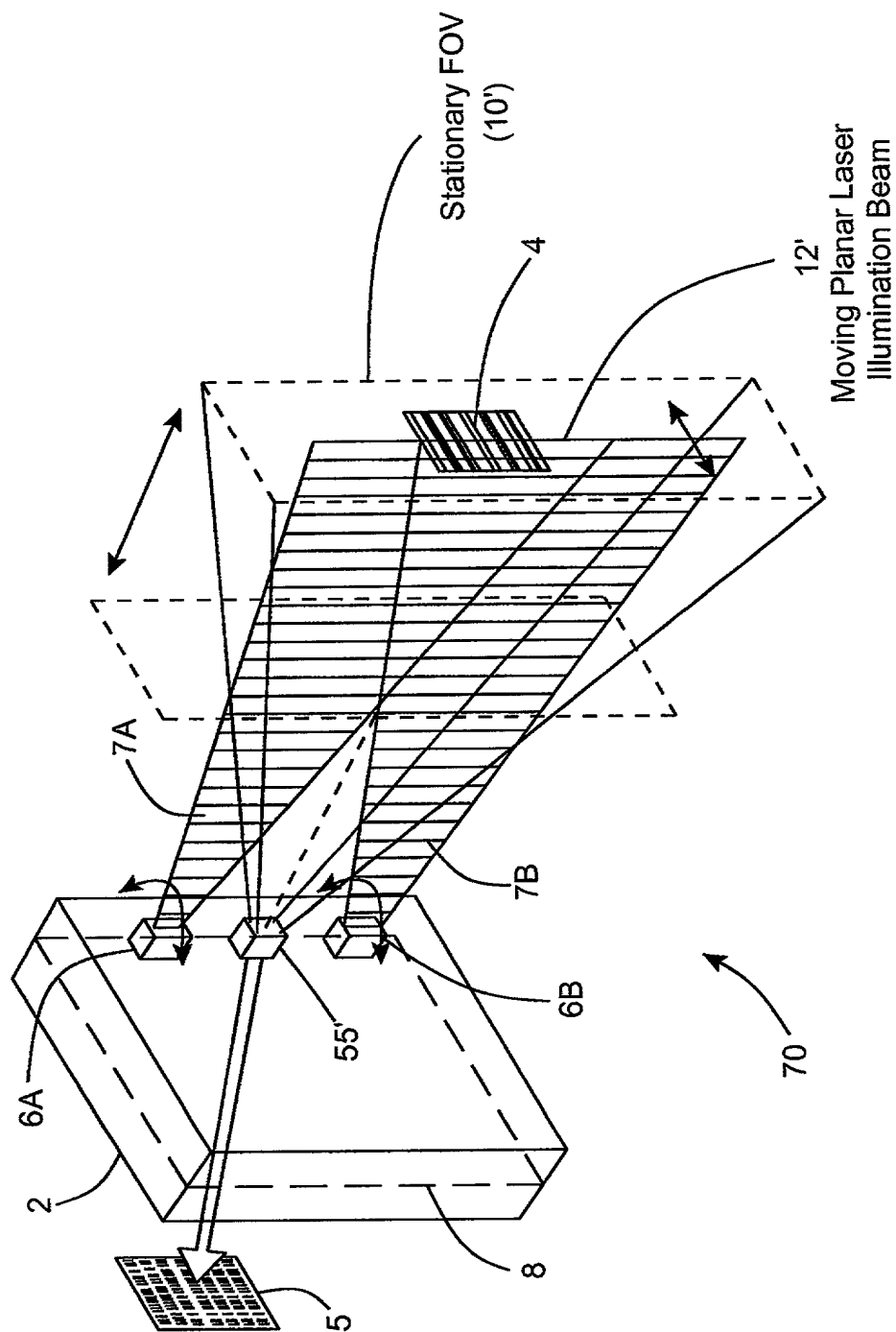


FIG. 5A

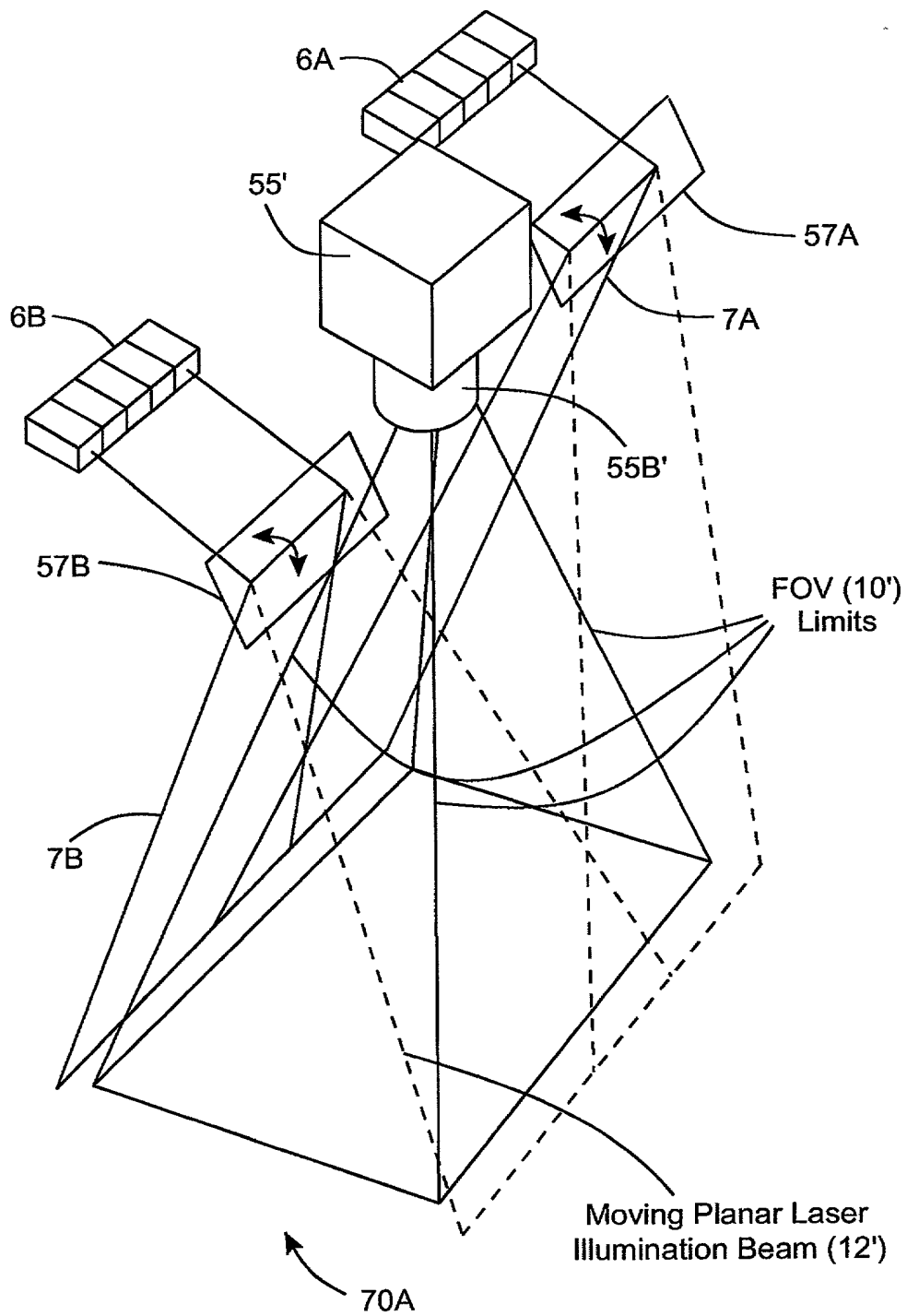


FIG. 5B1

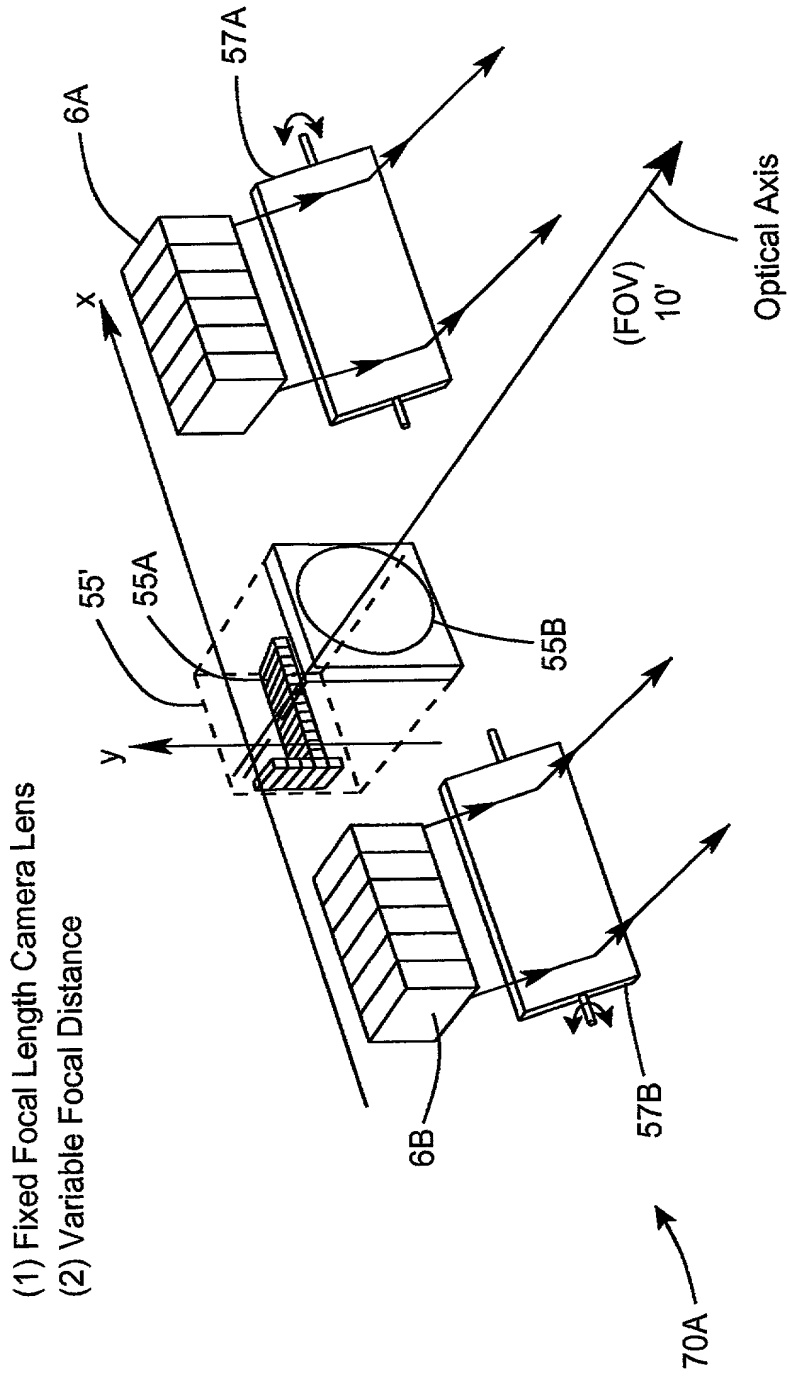


FIG. 5B2

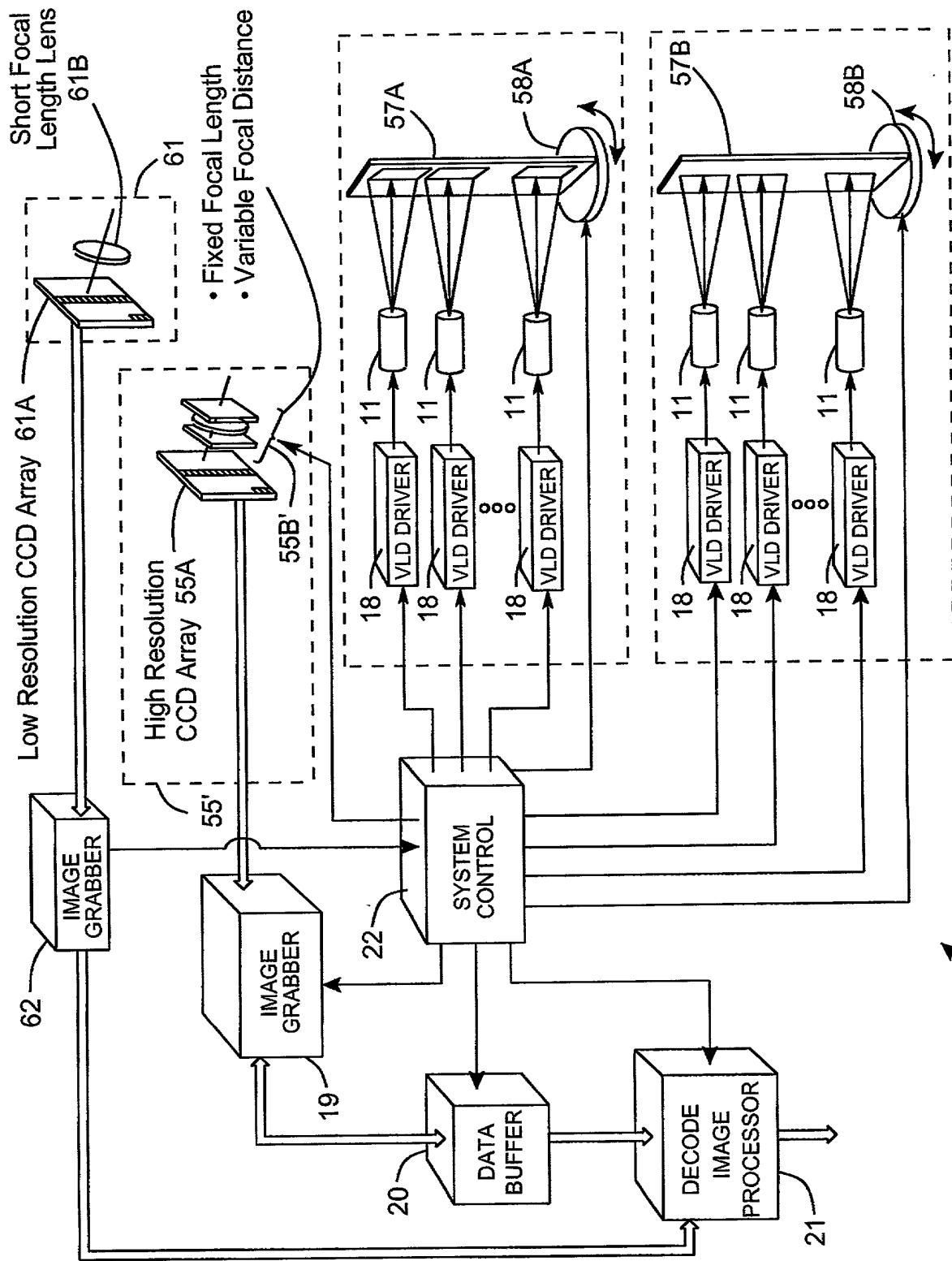


FIG. 5B3

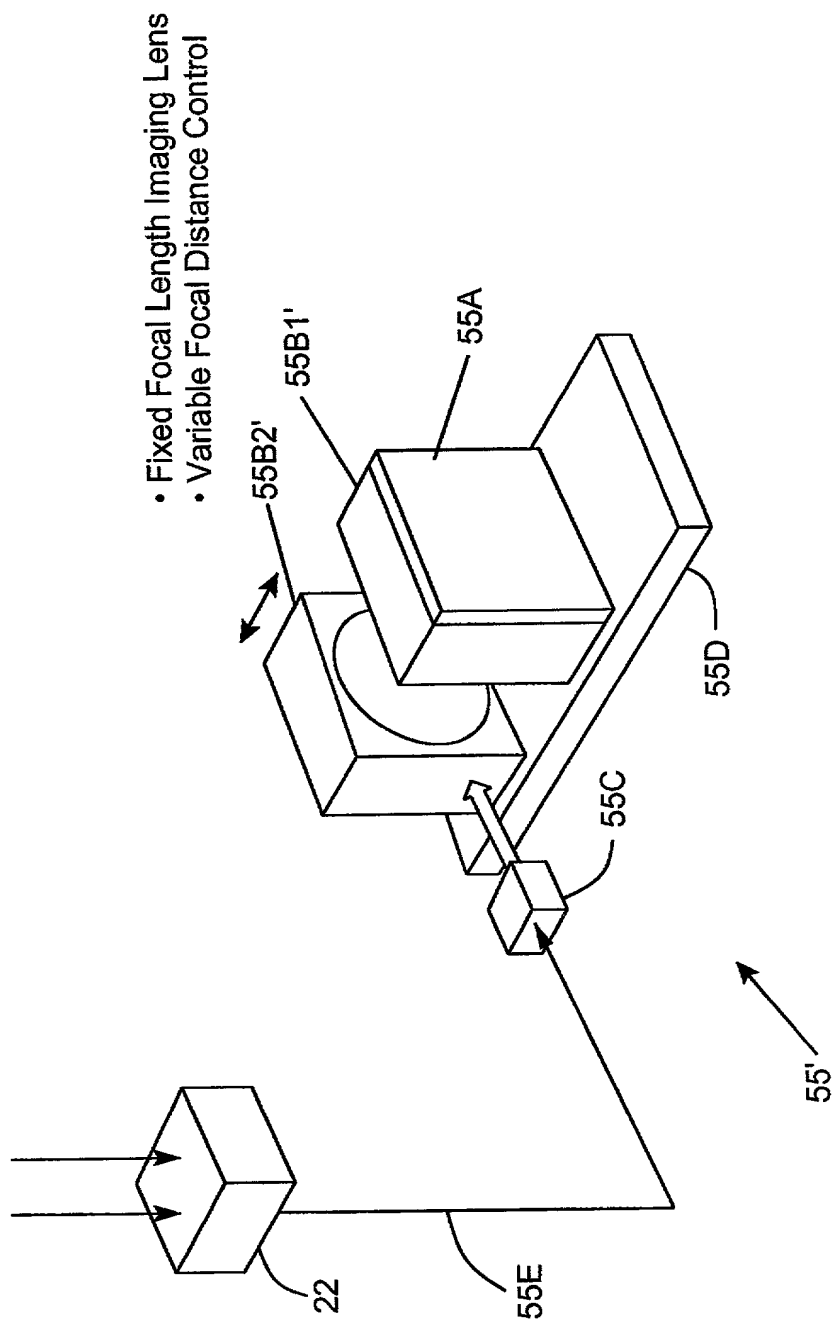


FIG. 5B4

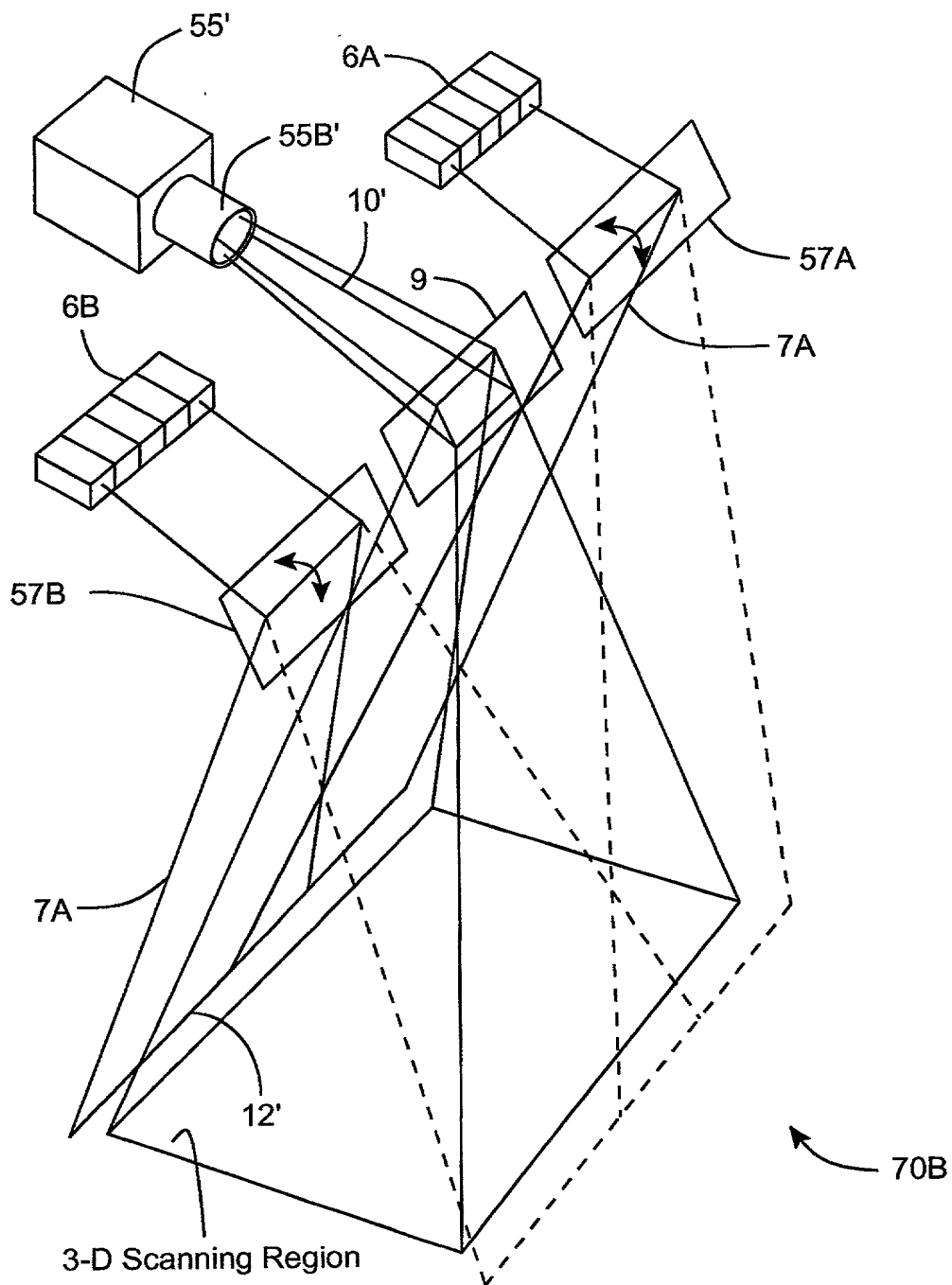


FIG. 5C1

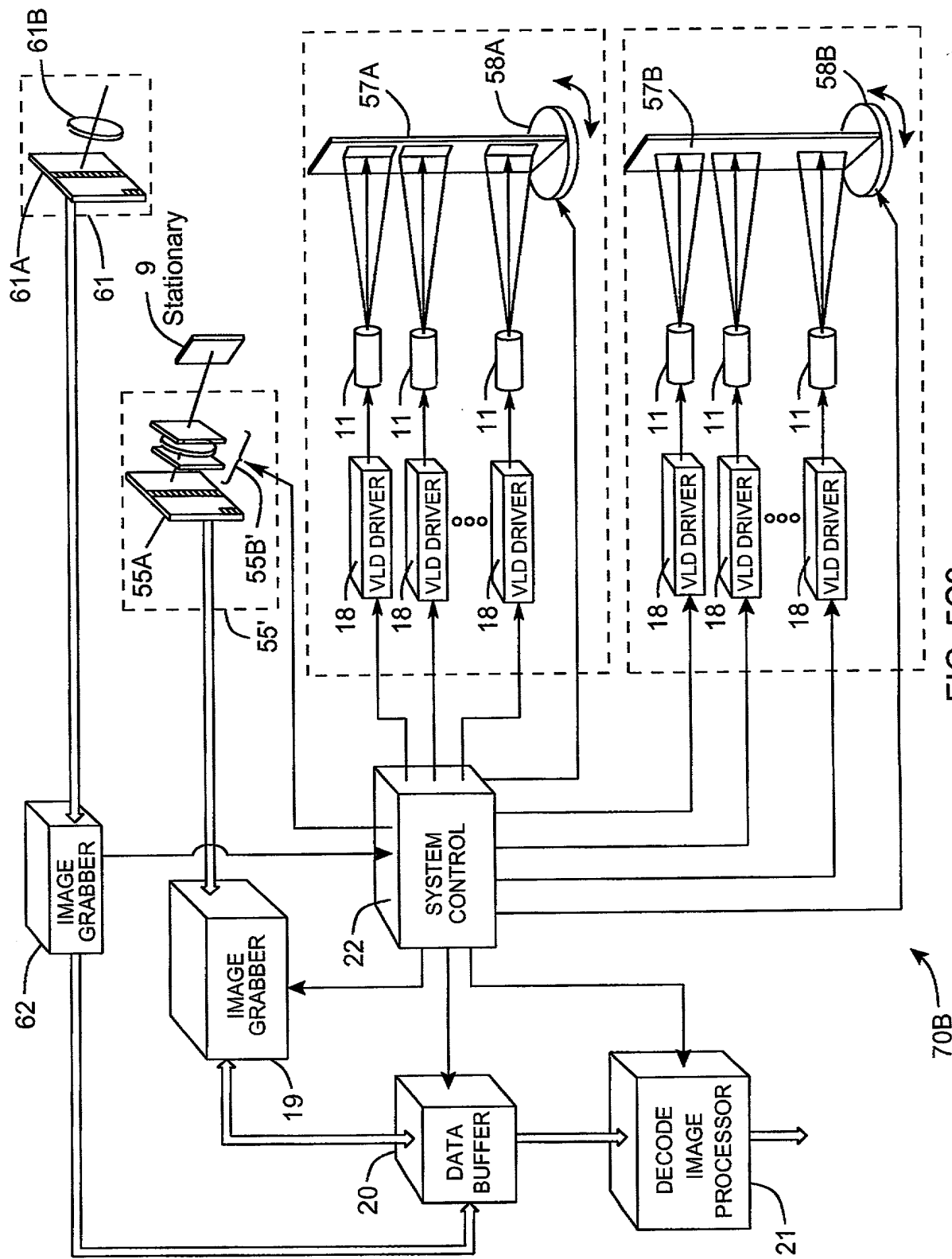


FIG. 5C3

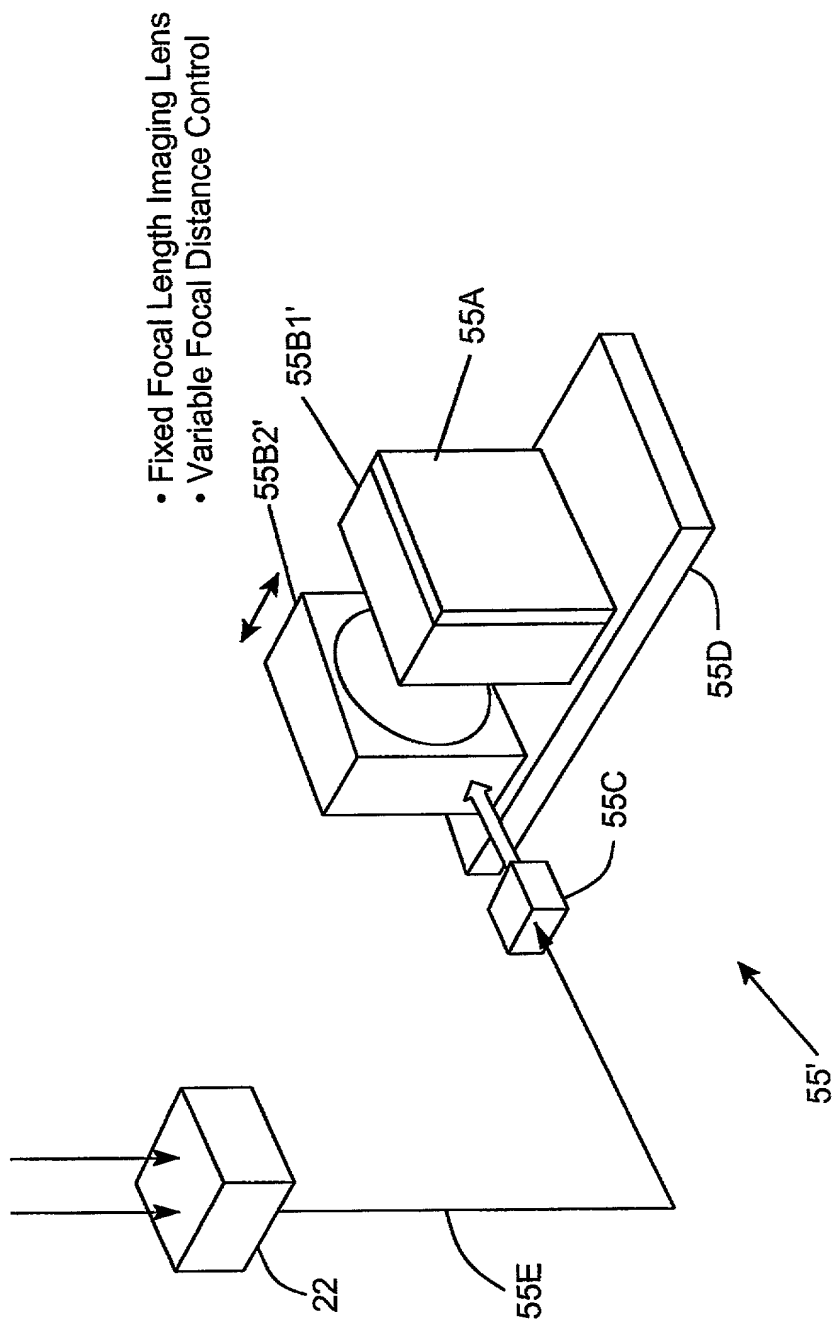


FIG. 5C4

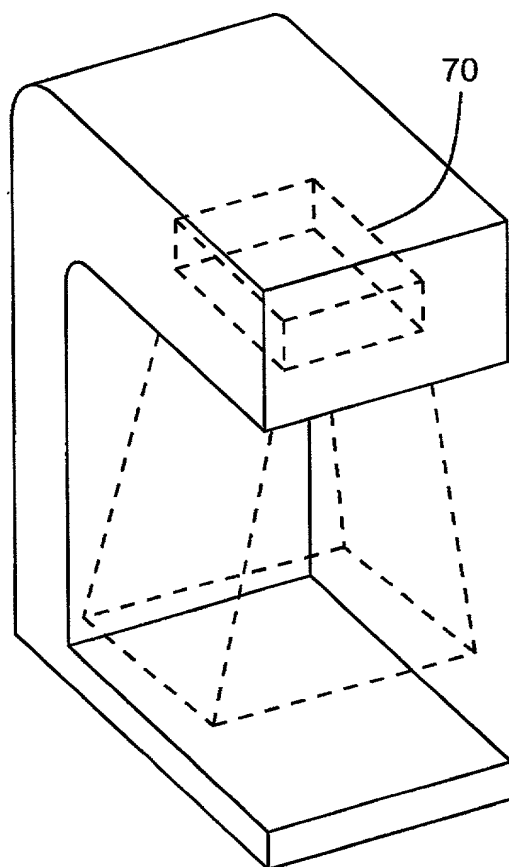


FIG. 5D

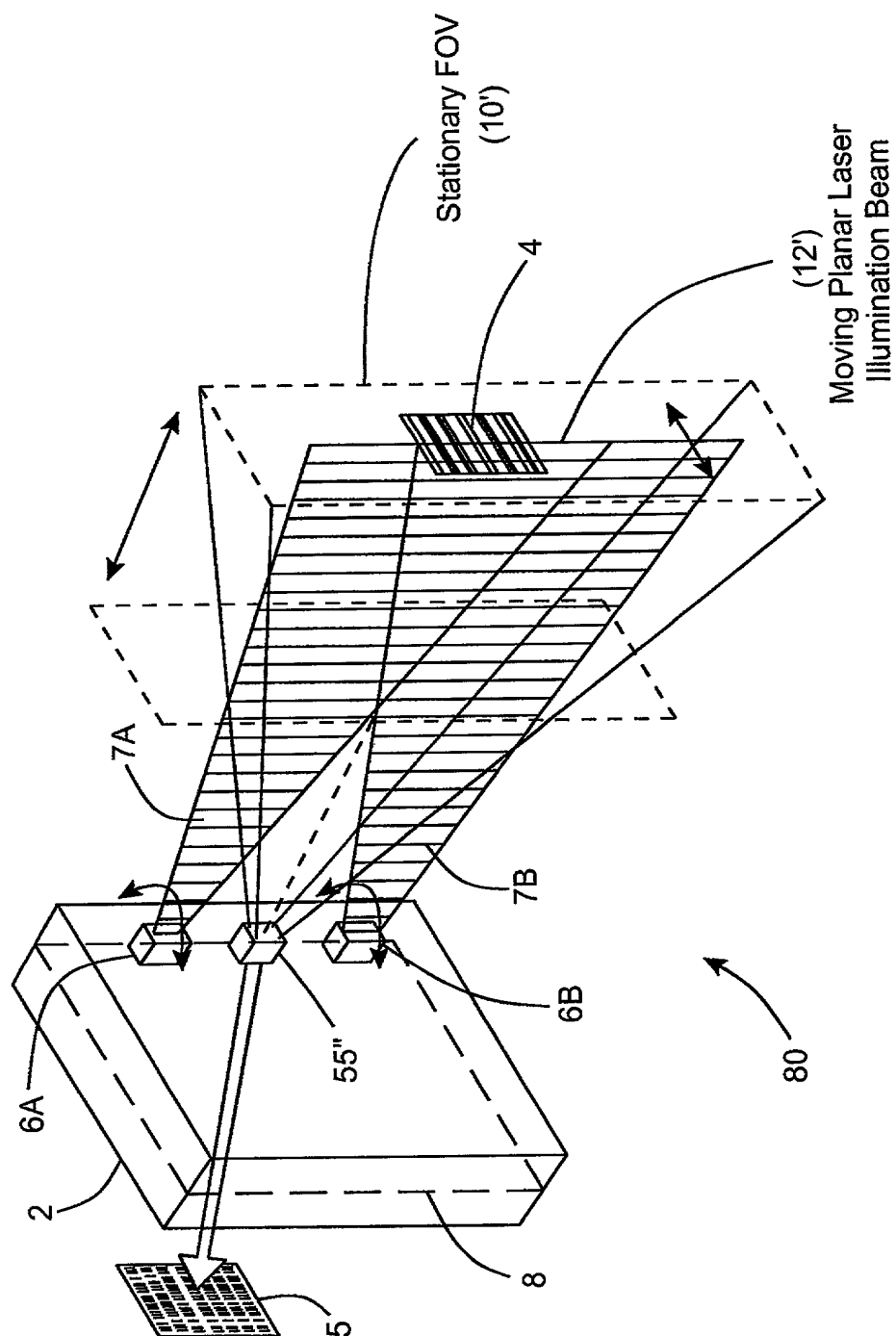


FIG. 6A

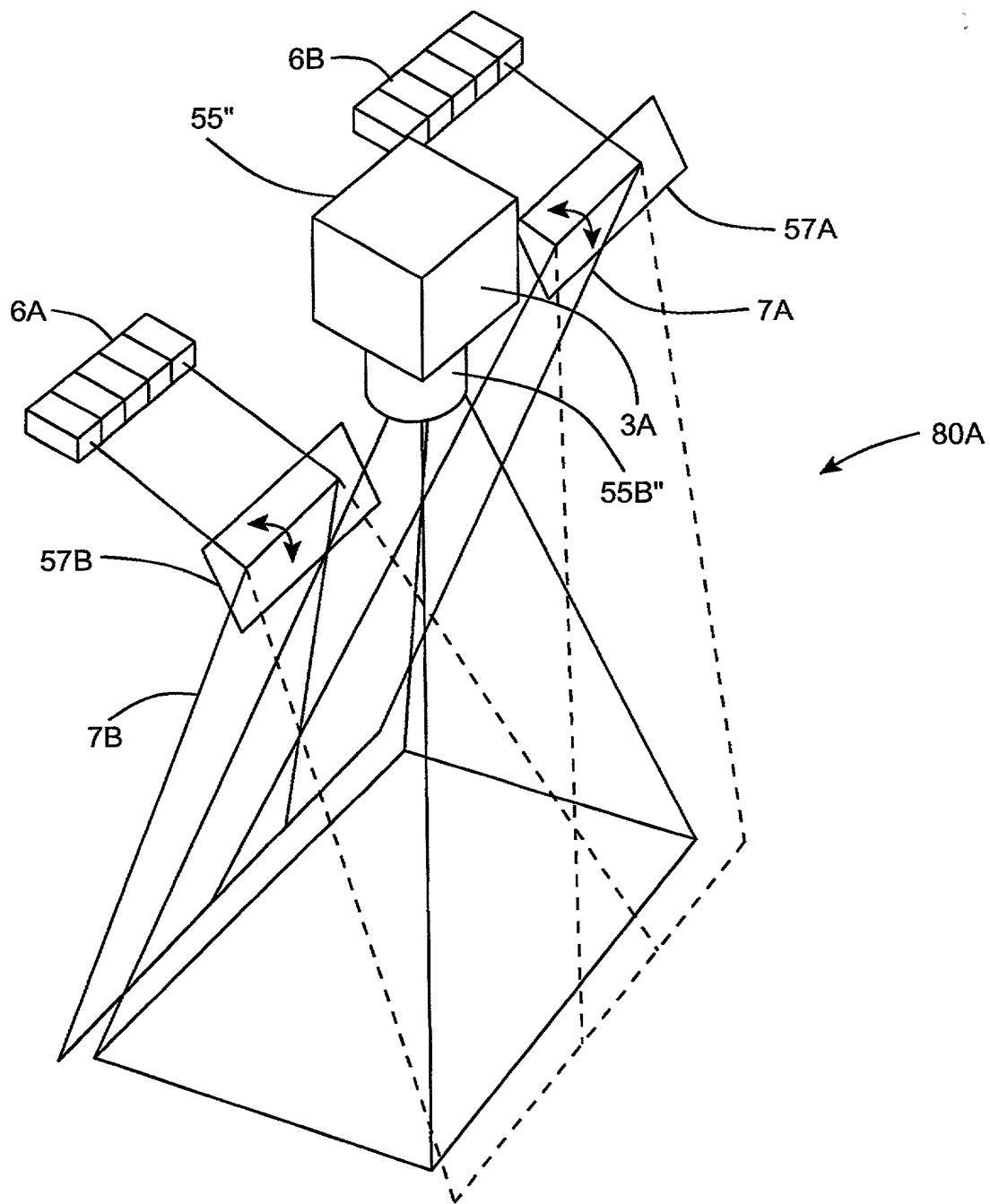


FIG. 6B1

- (1) Variable Focal Length Camera Lens
- (2) Variable Focal Distance

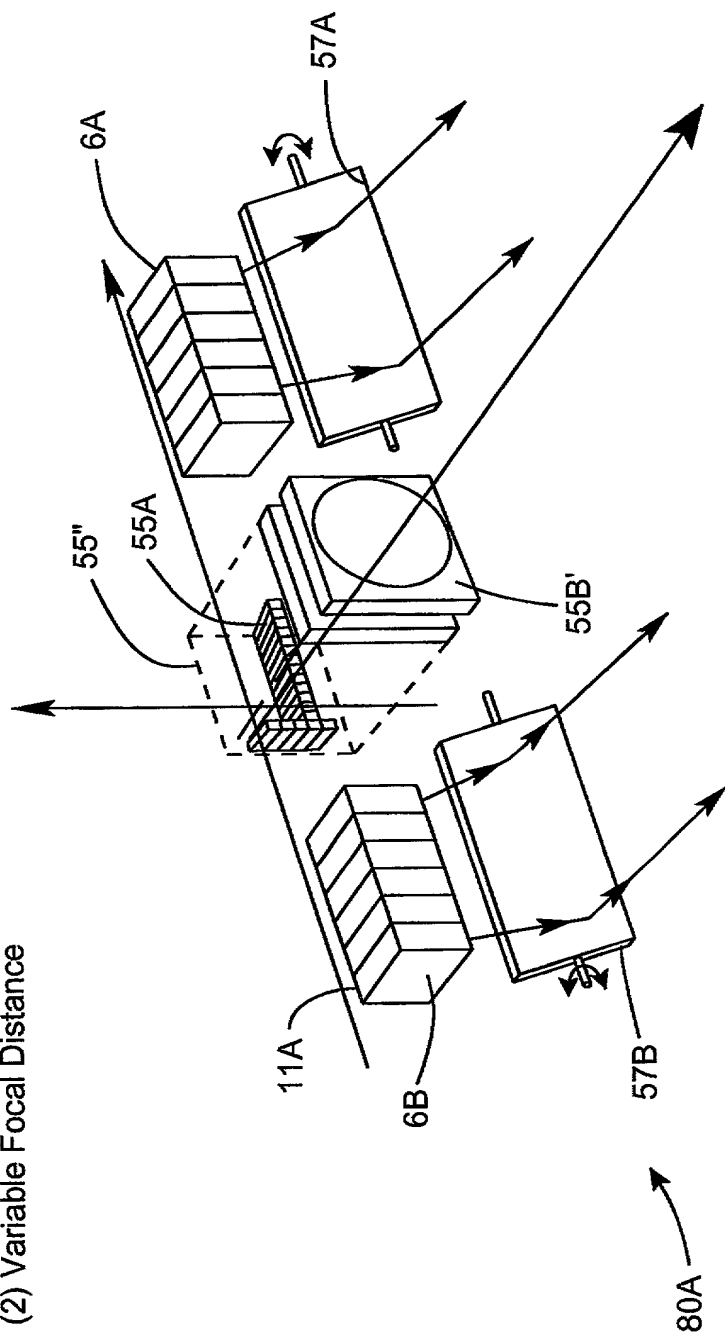


FIG. 6B2

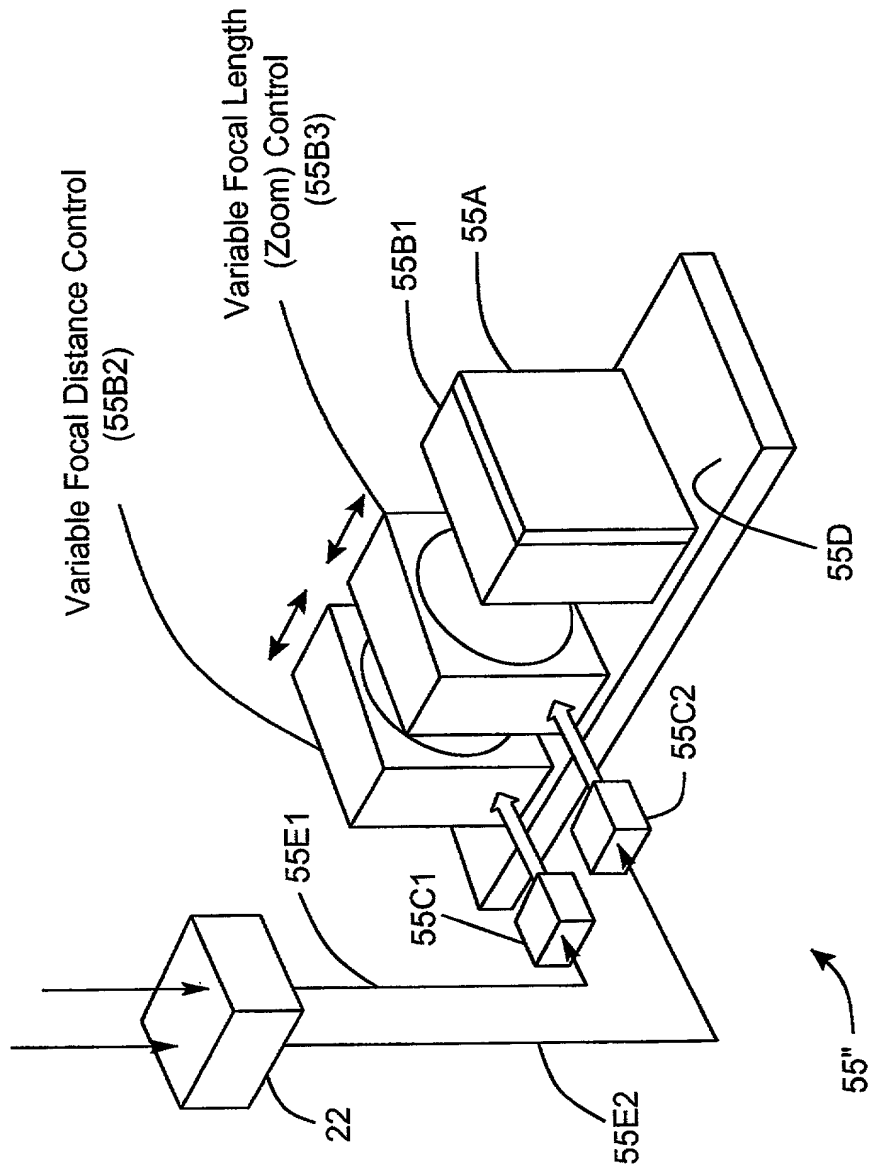


FIG. 6B4

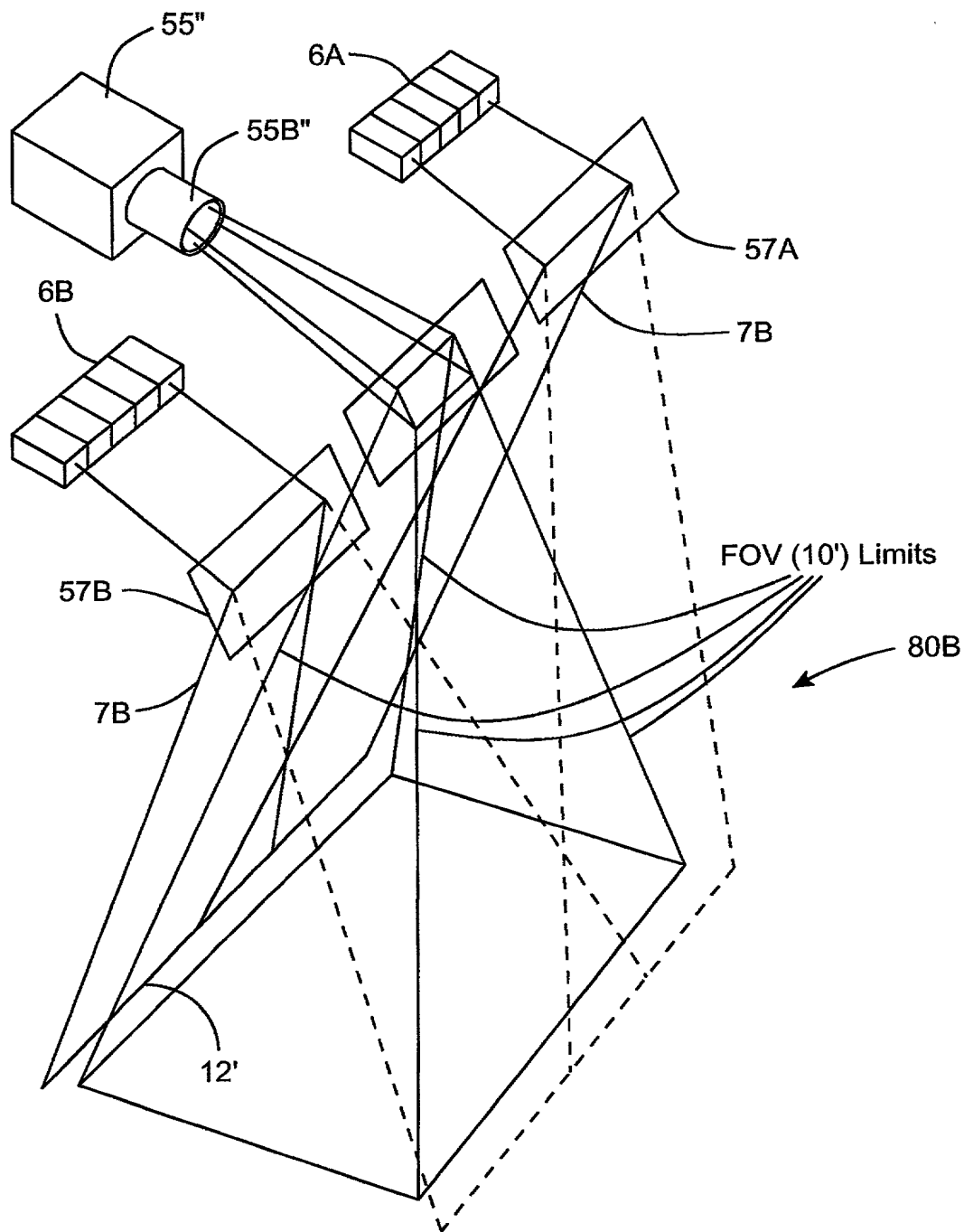


FIG. 6C1

- (1) Variable Focal Length Camera Lens
- (2) Variable Focal Distance

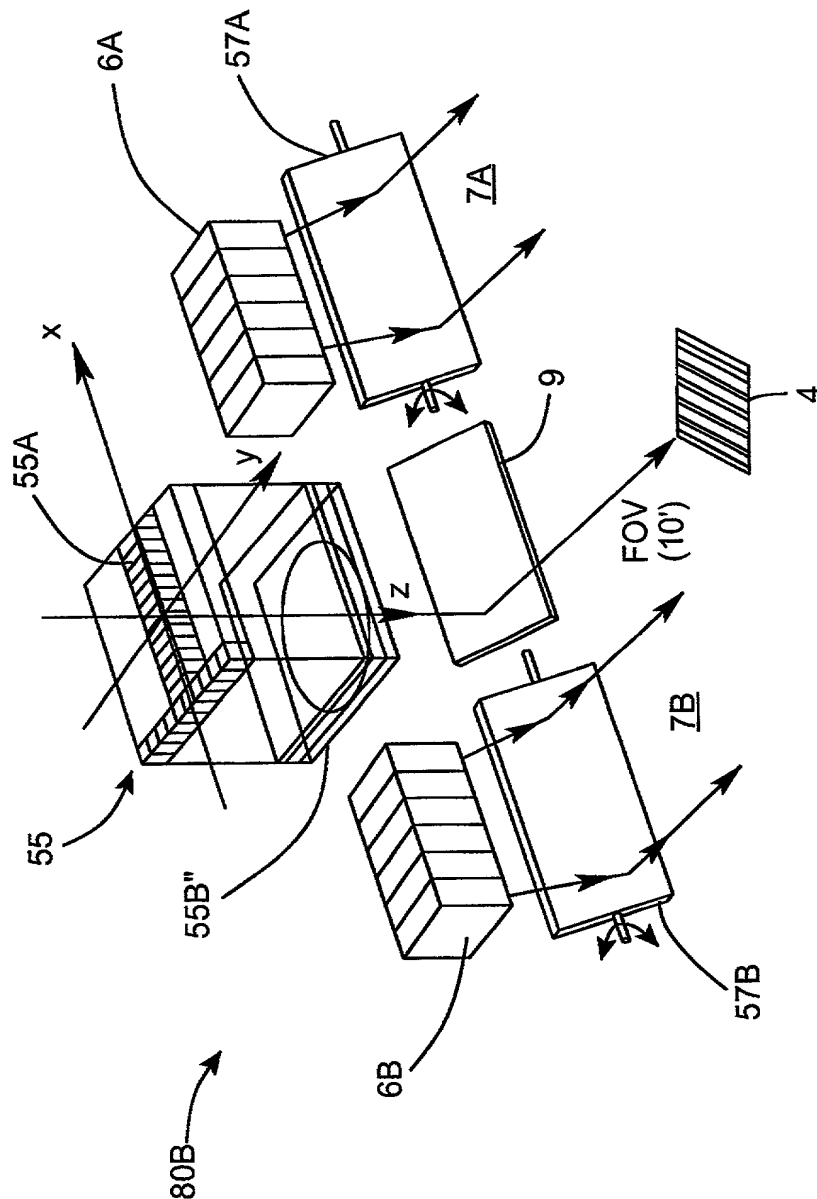


FIG. 6C2

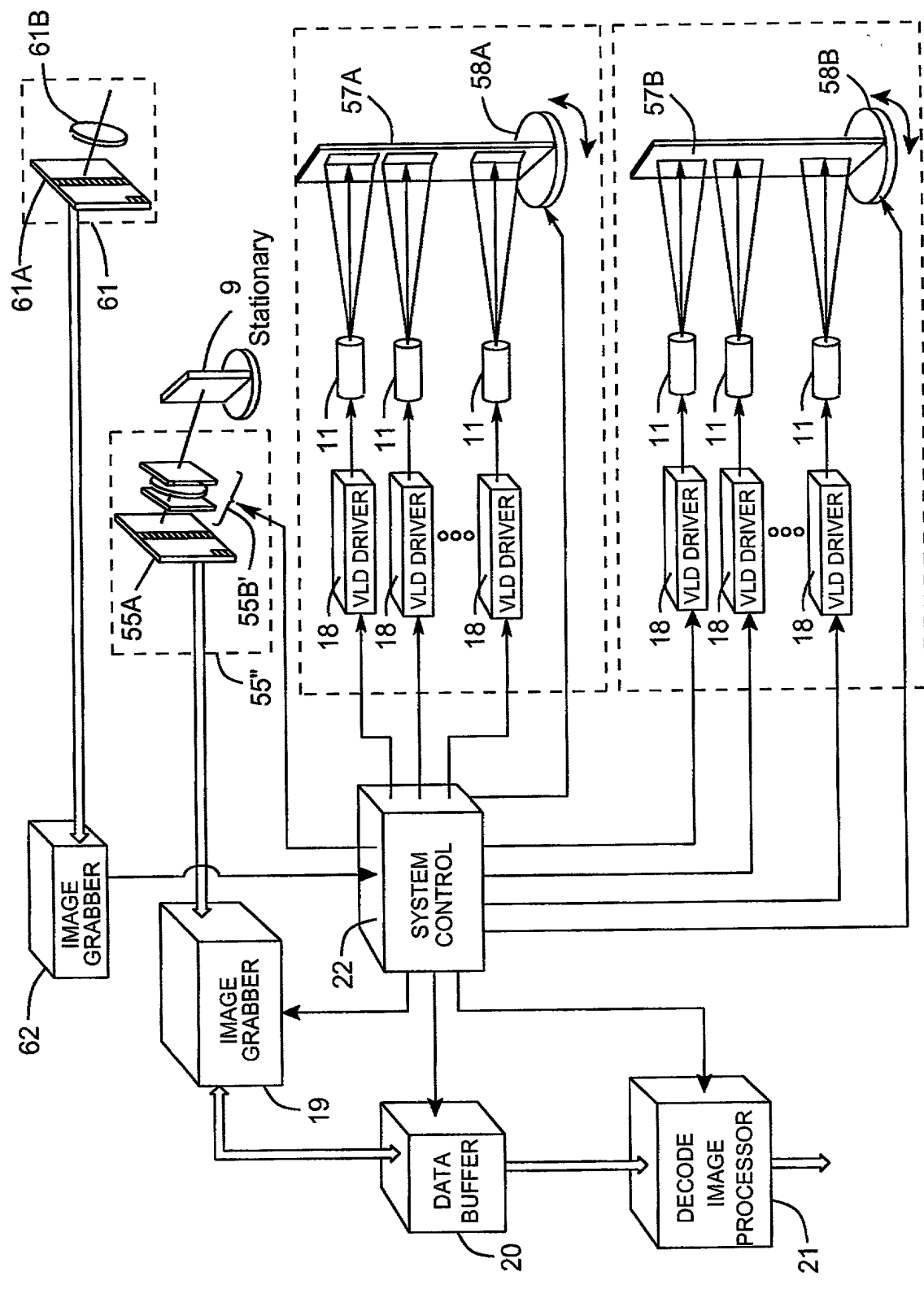


FIG. 6C3

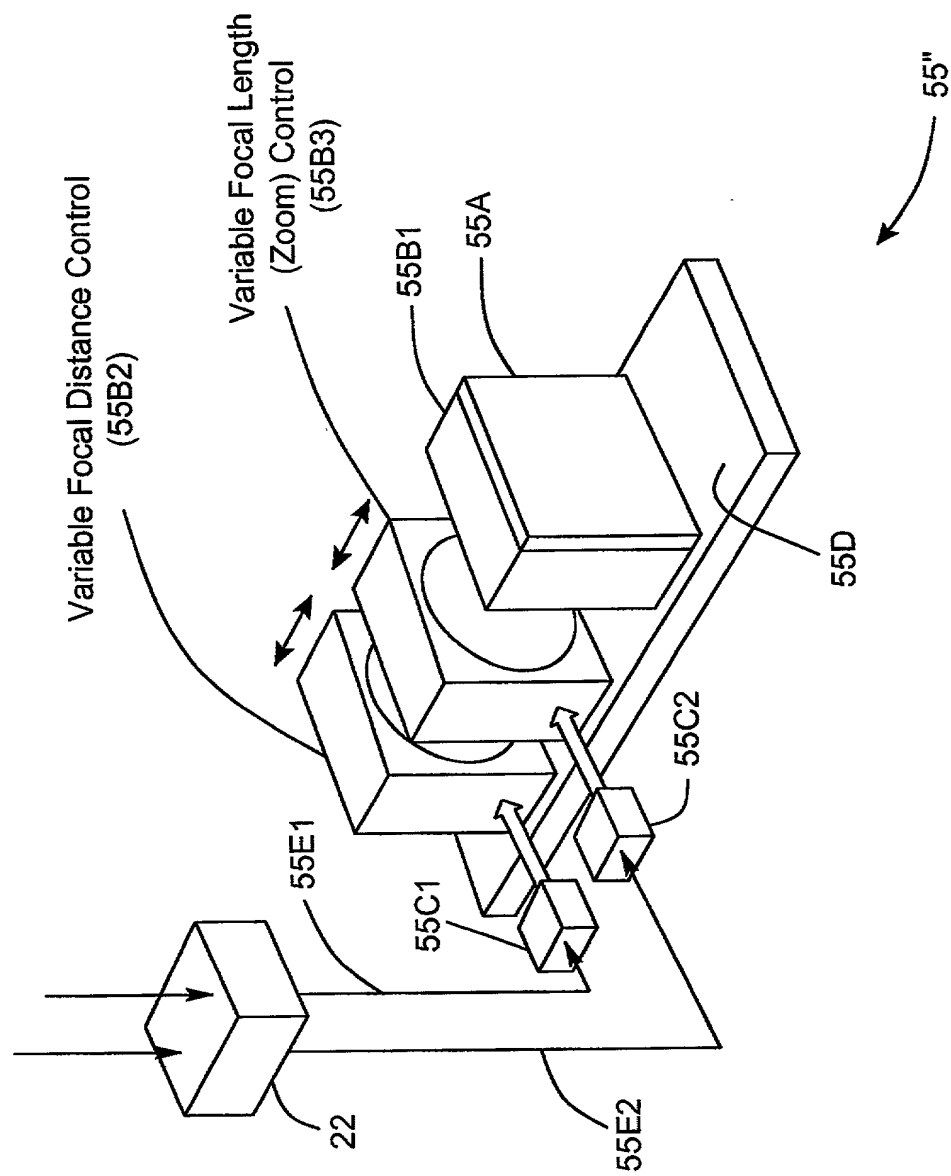


FIG. 6C4

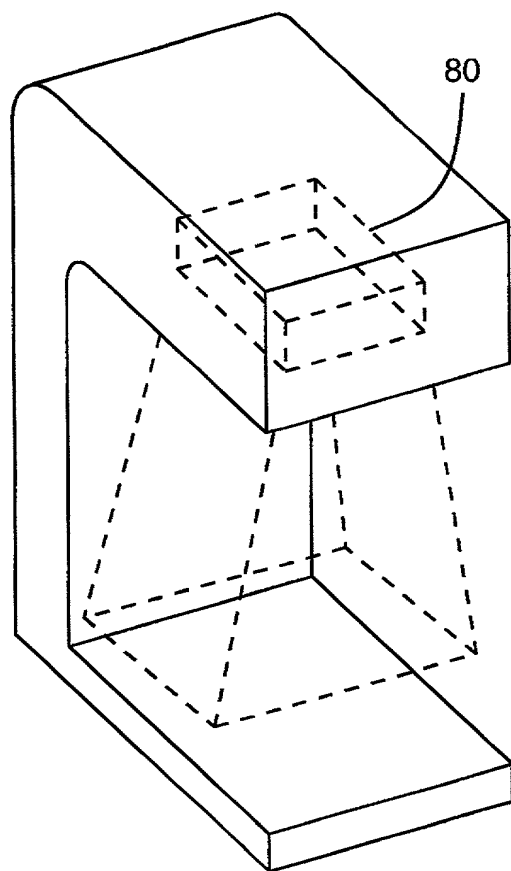


FIG. 6D

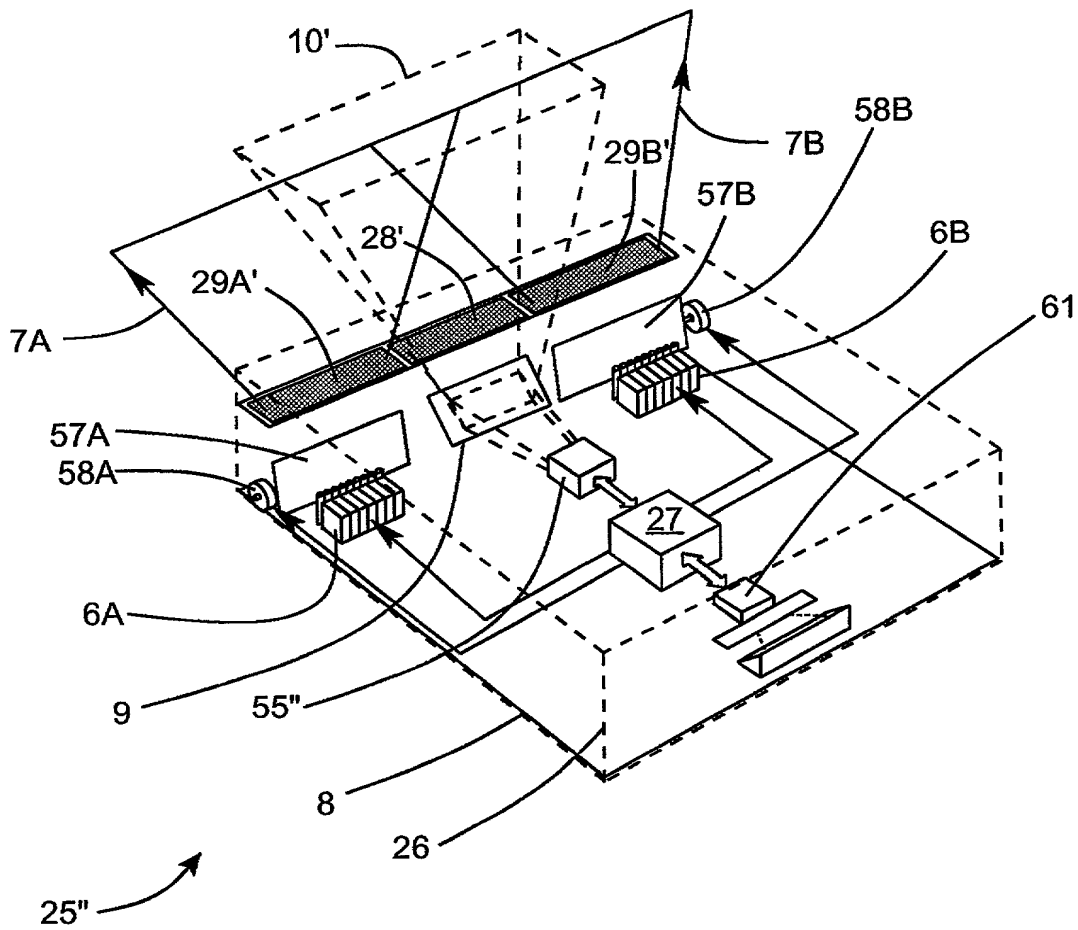


FIG. 6D1

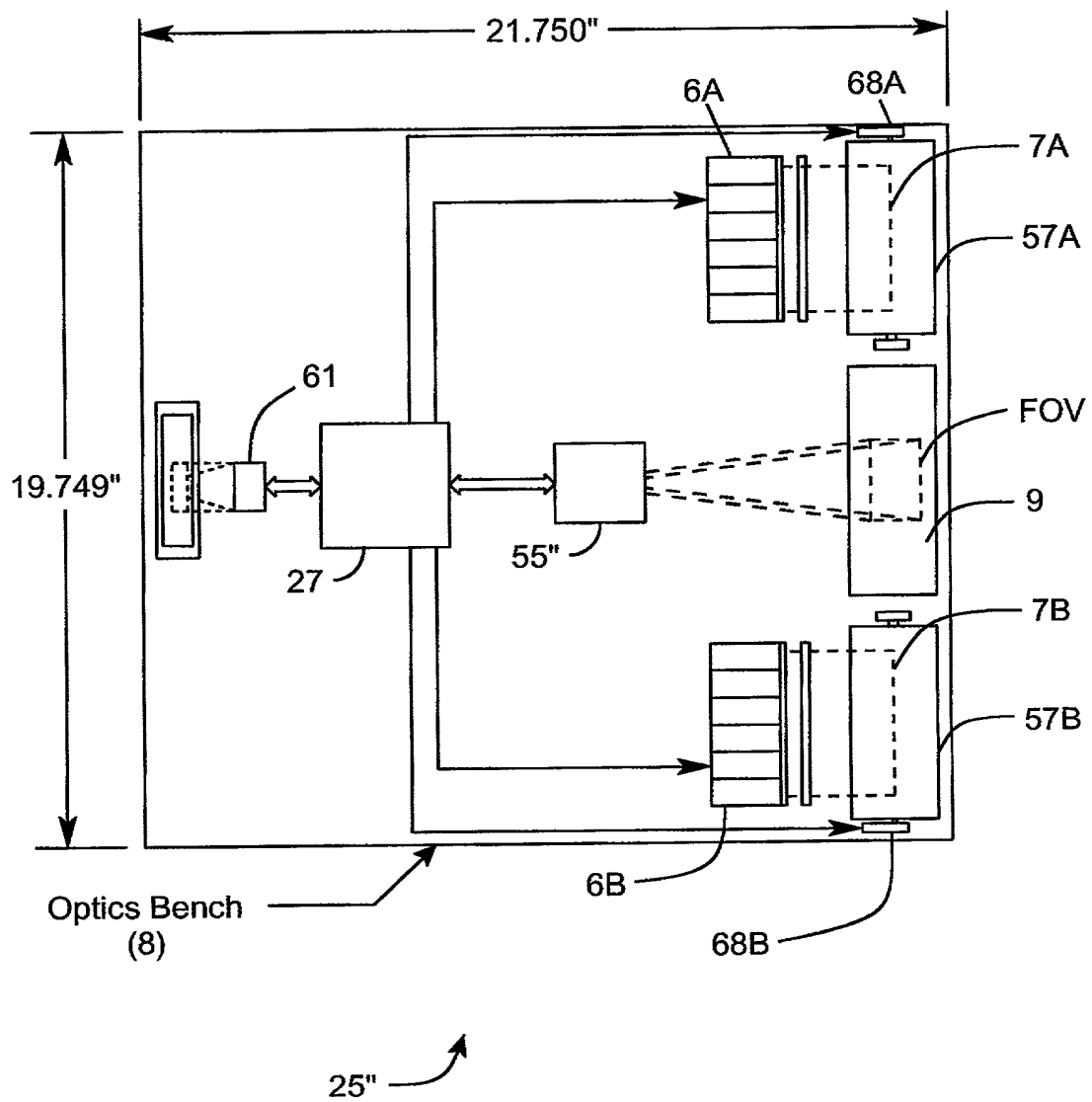


FIG. 6D2

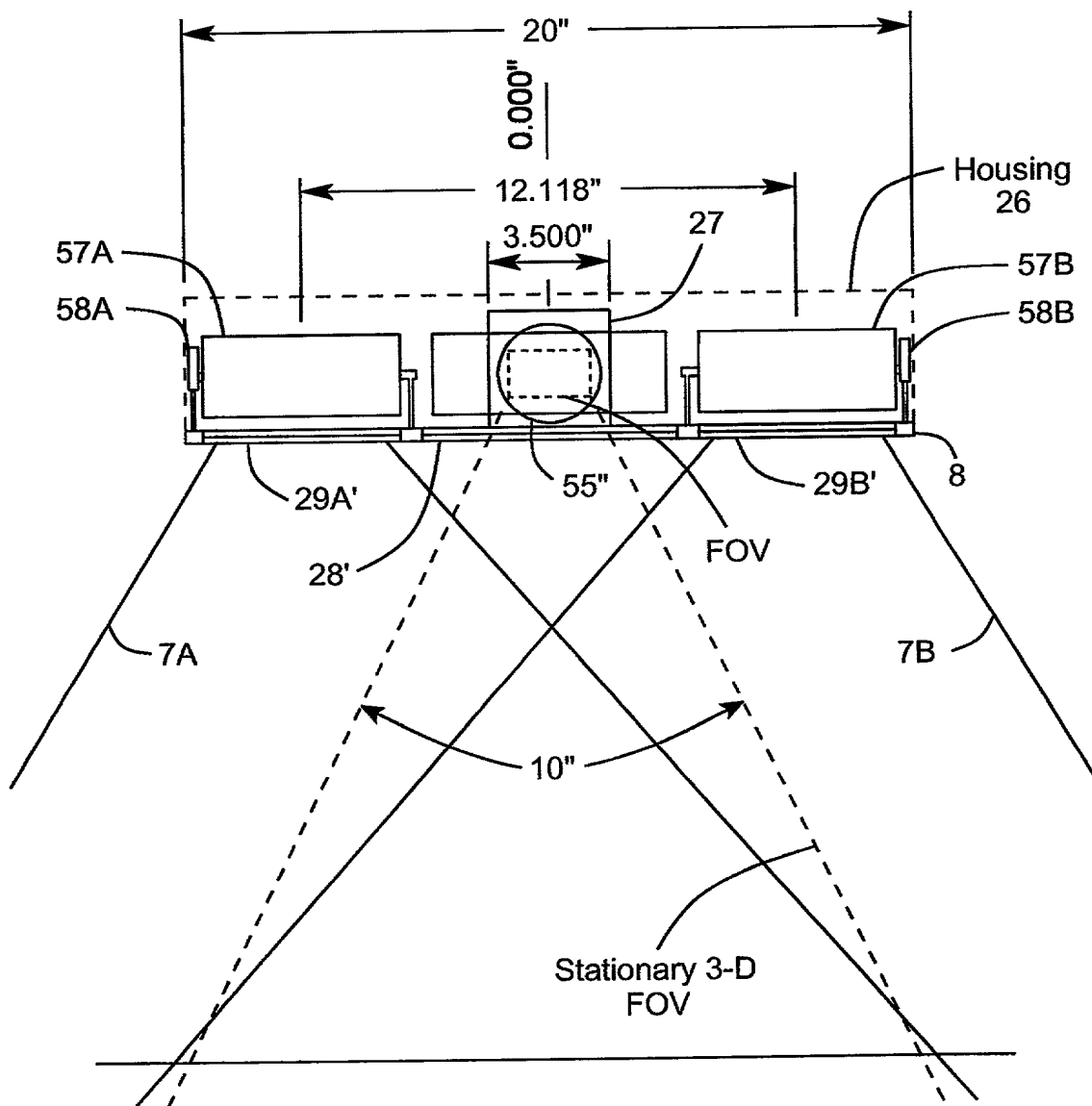


FIG. 6D3

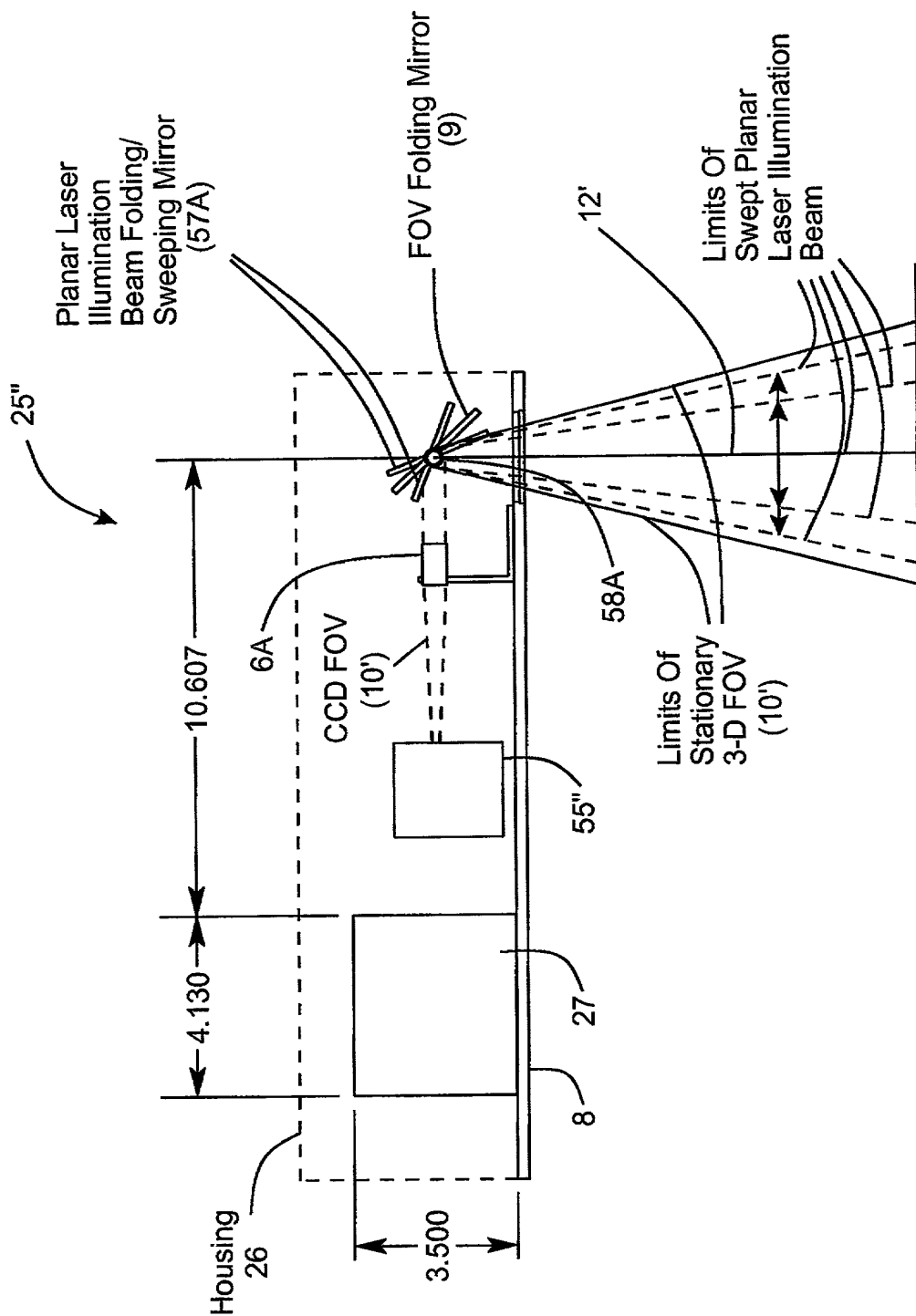


FIG. 6D4

206020-1506500T

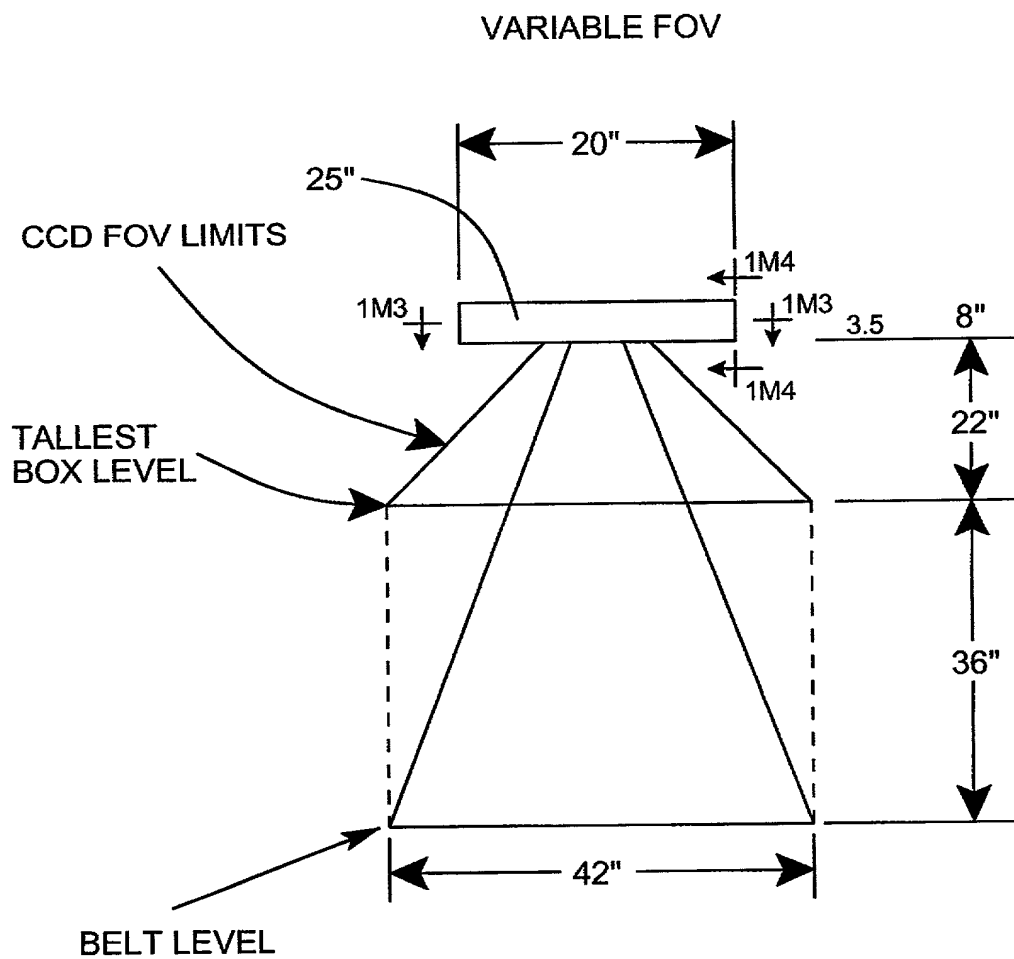


FIG. 6D5

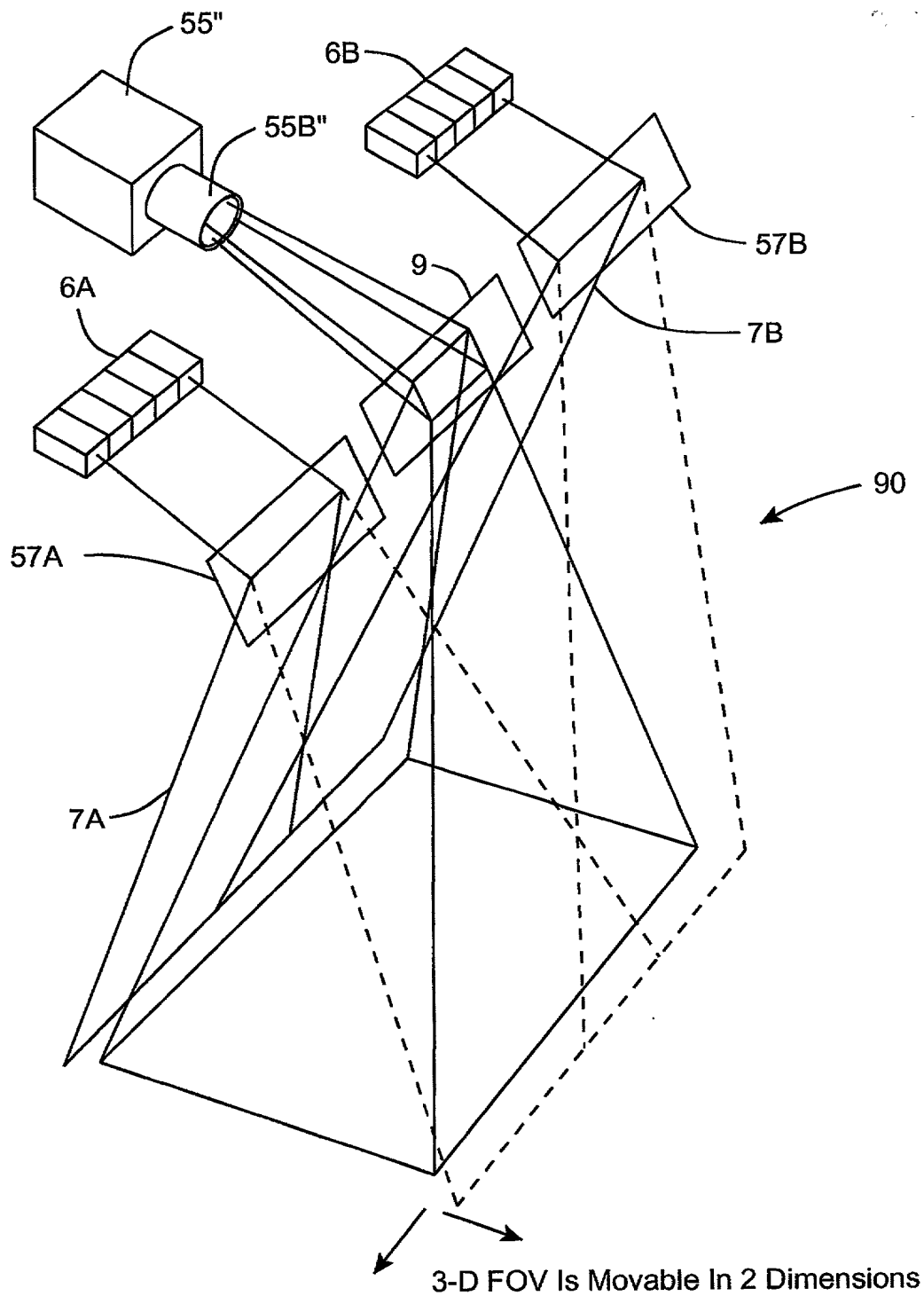


FIG. 6E1

- (1) Variable Focal Length Camera Lens
- (2) Variable Focal Distance

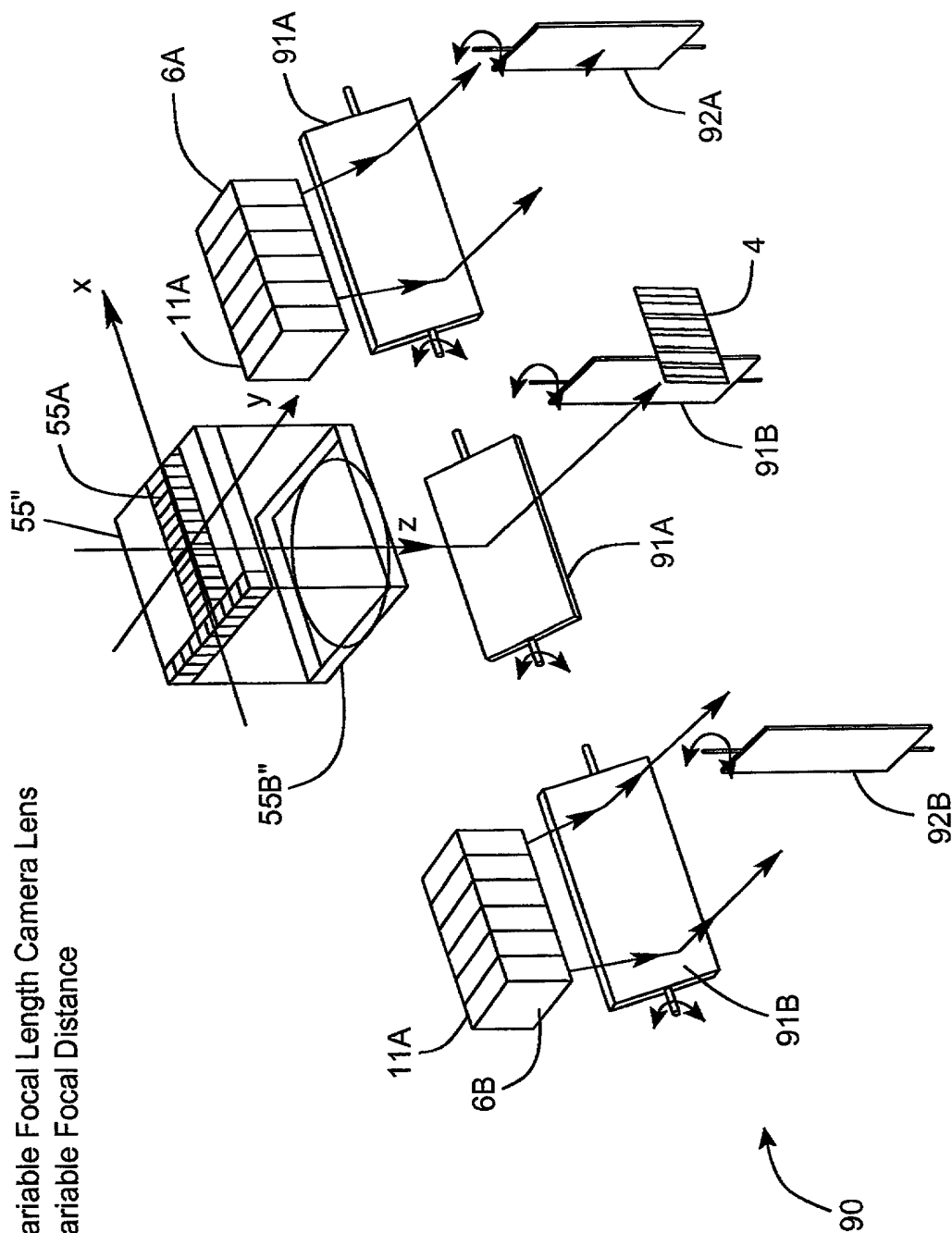


FIG. 6E2

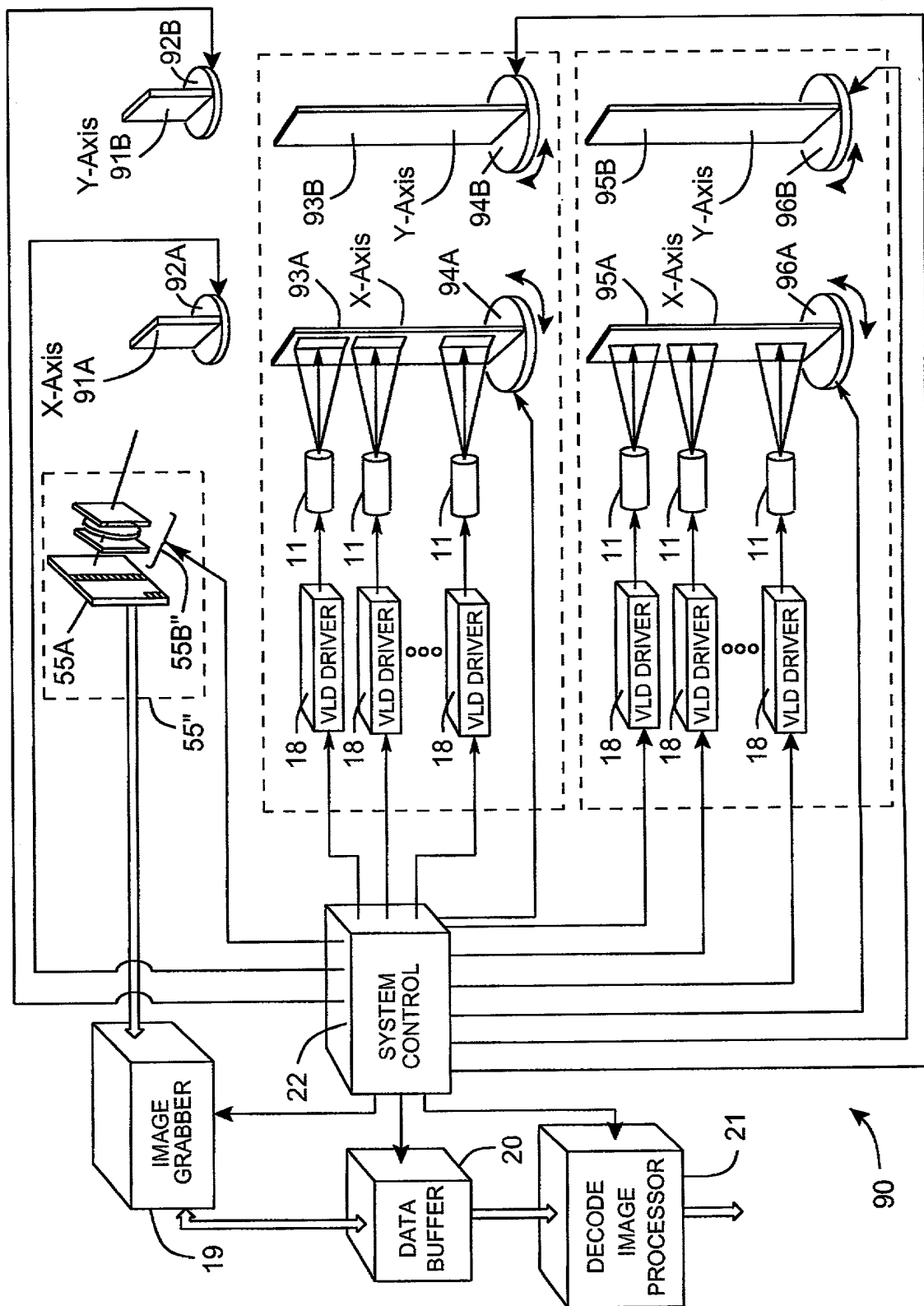


FIG. 6E3

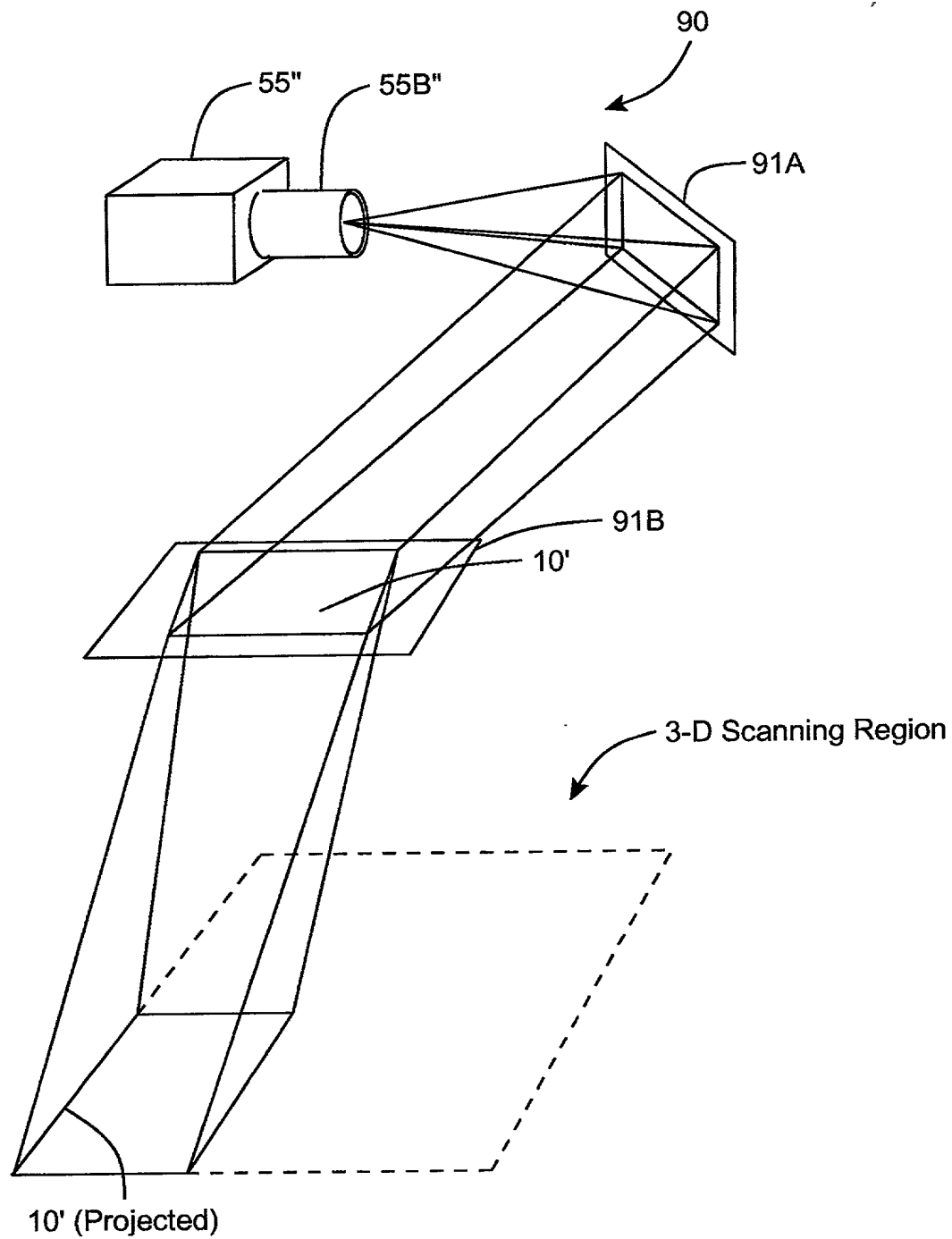


FIG. 6E4

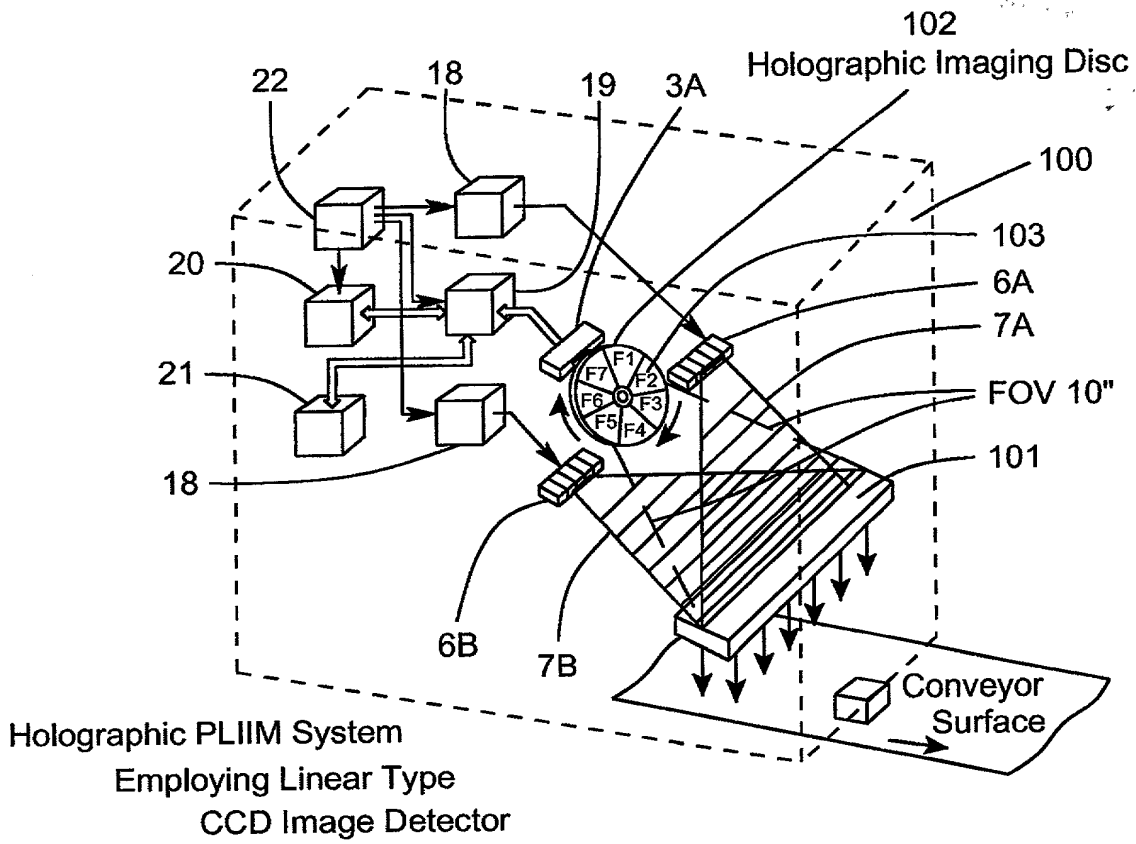


FIG. 7A

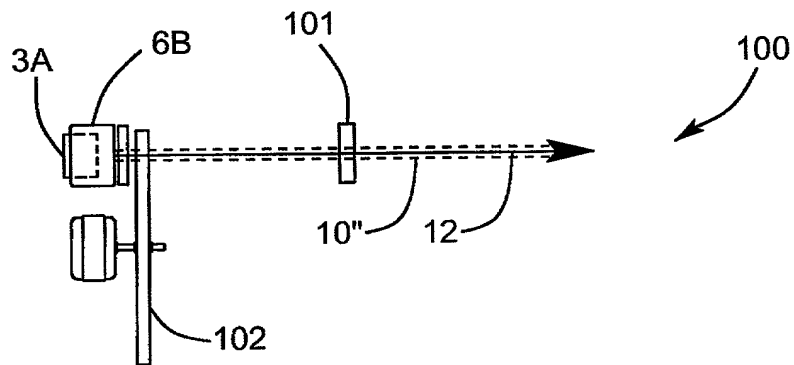


FIG. 7B

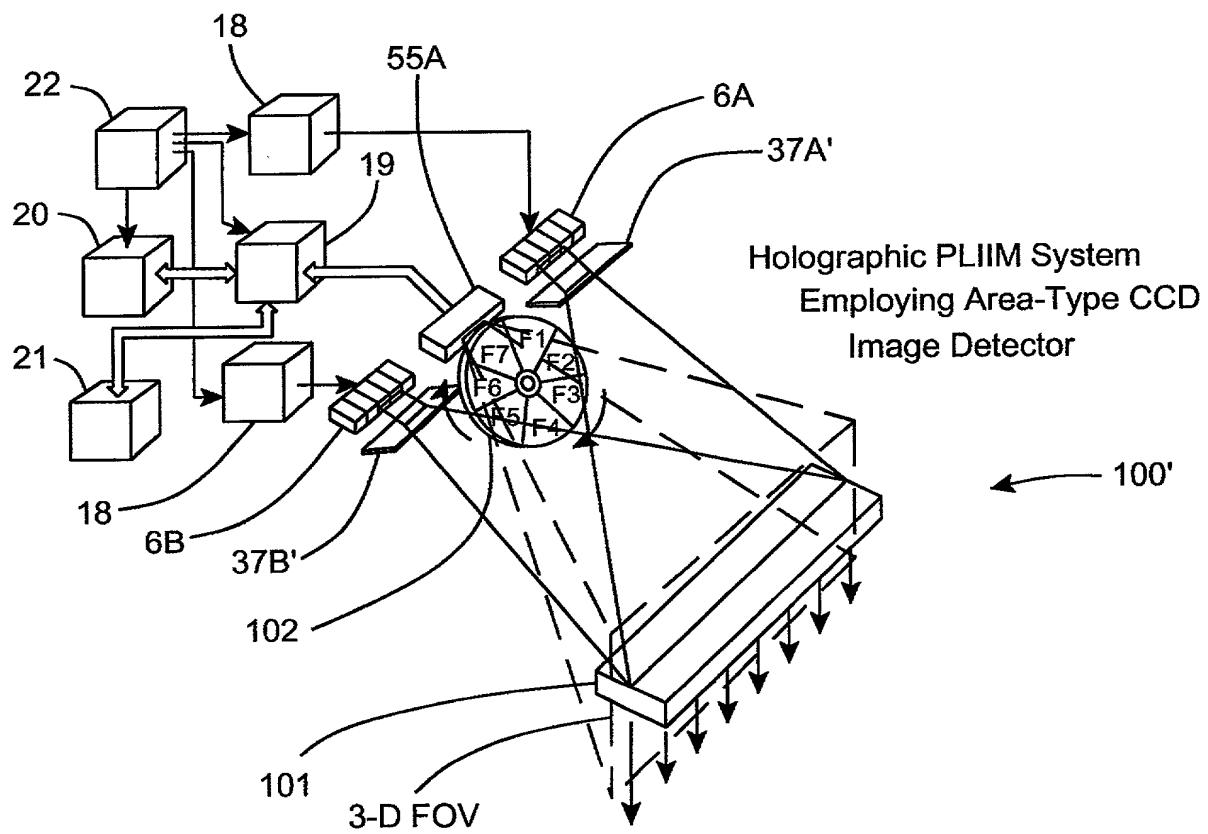


FIG. 8A

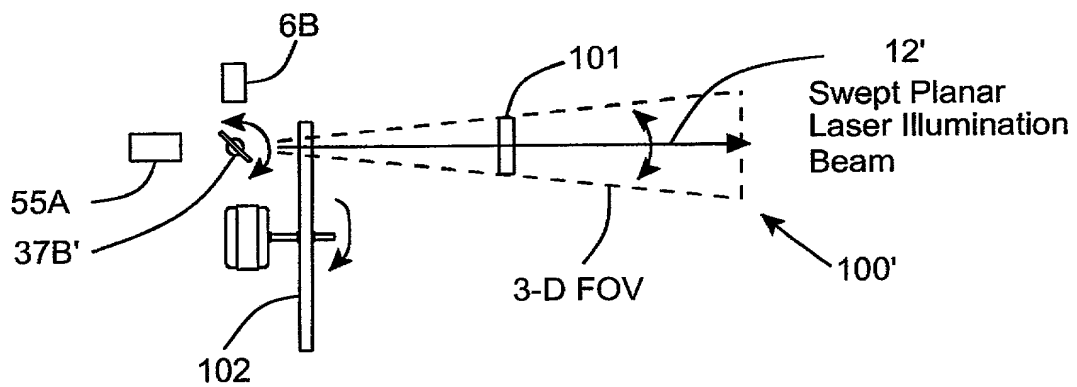


FIG. 8B

1-D CCD Scanner Embodiment

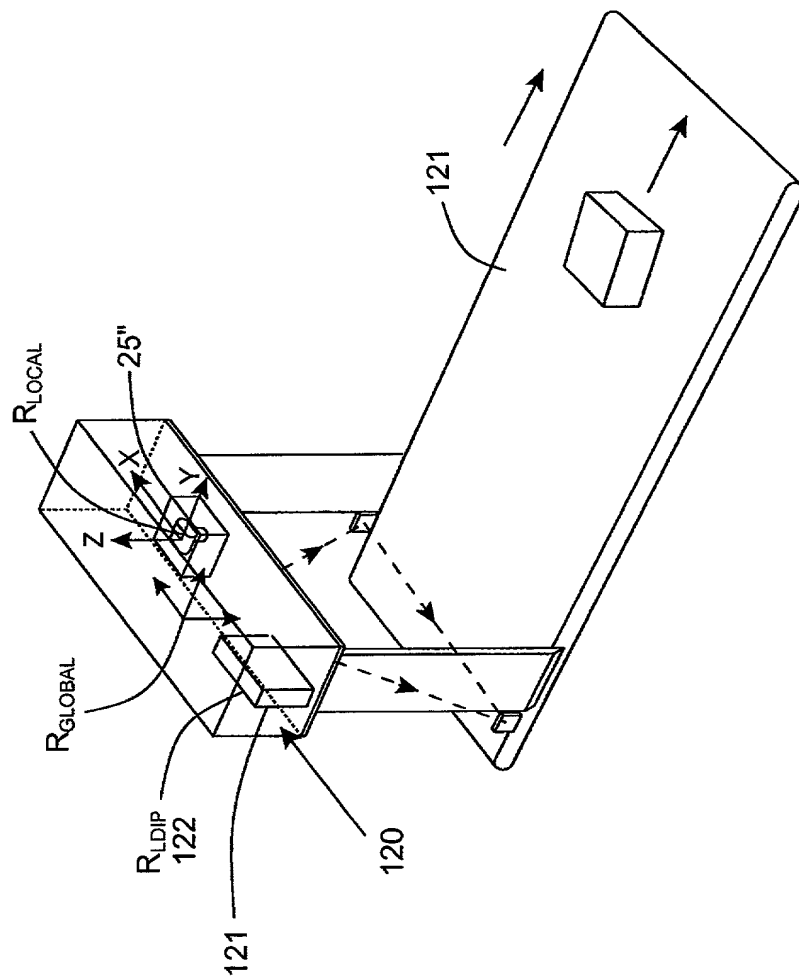


FIG. 9

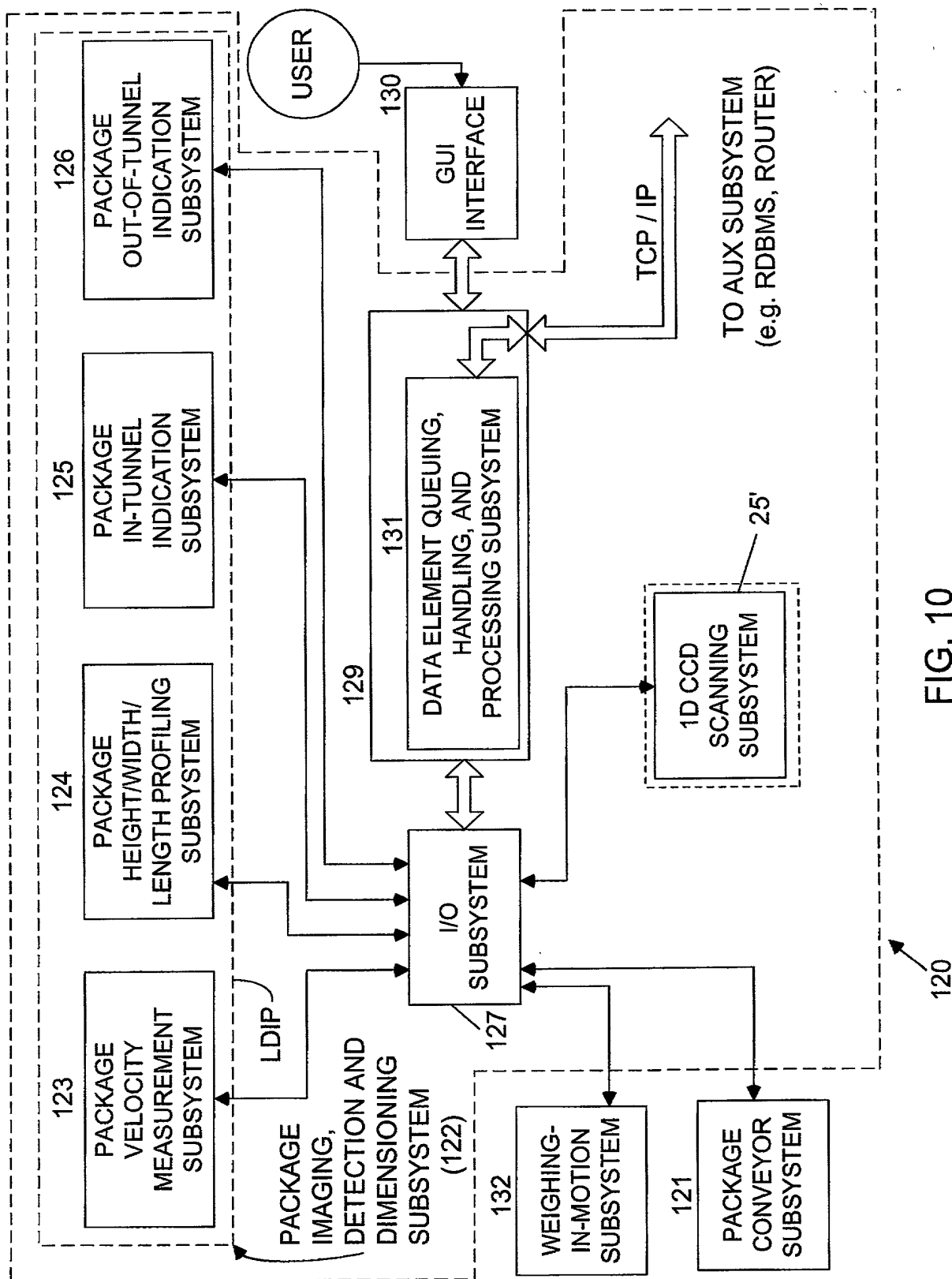


FIG. 10

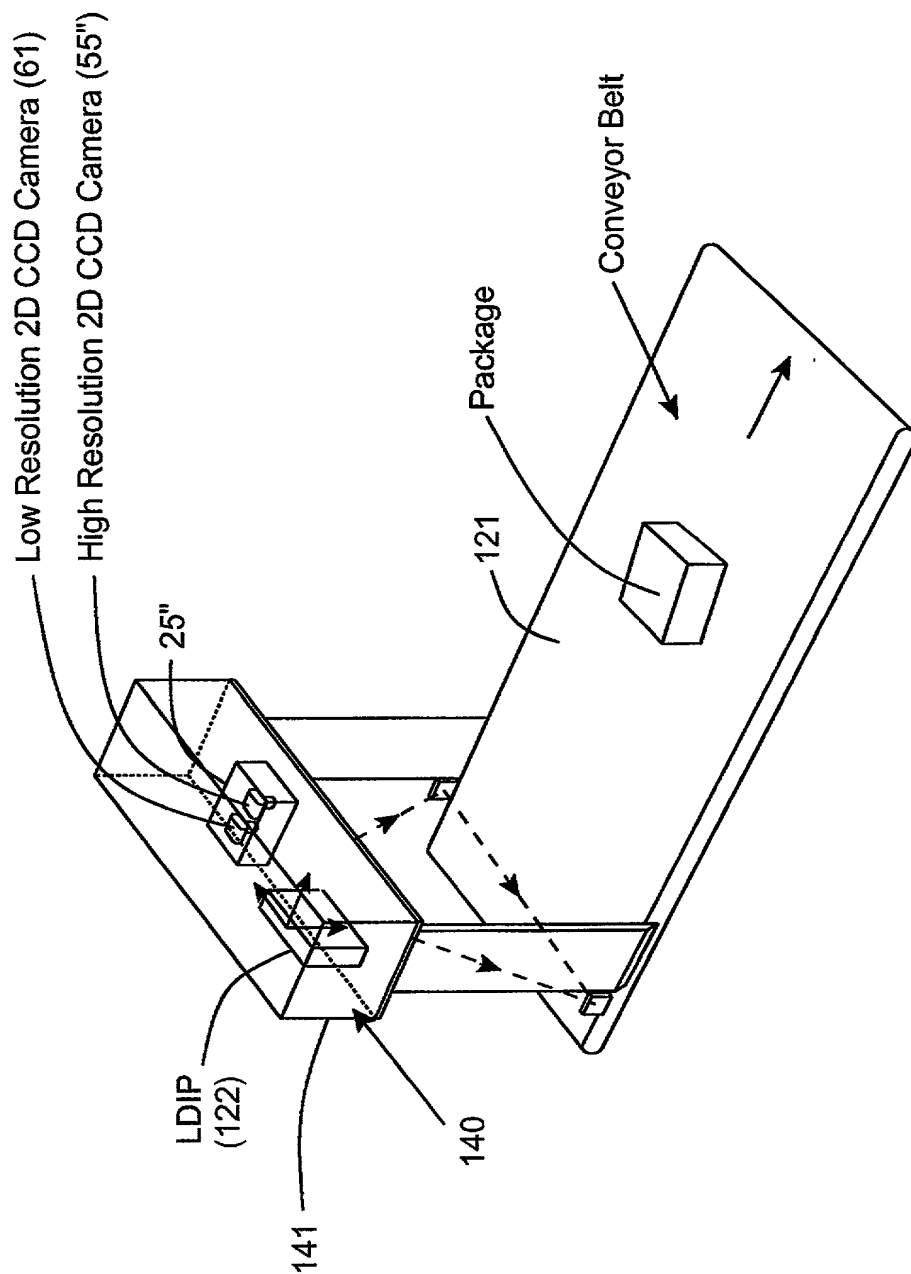


FIG. 11

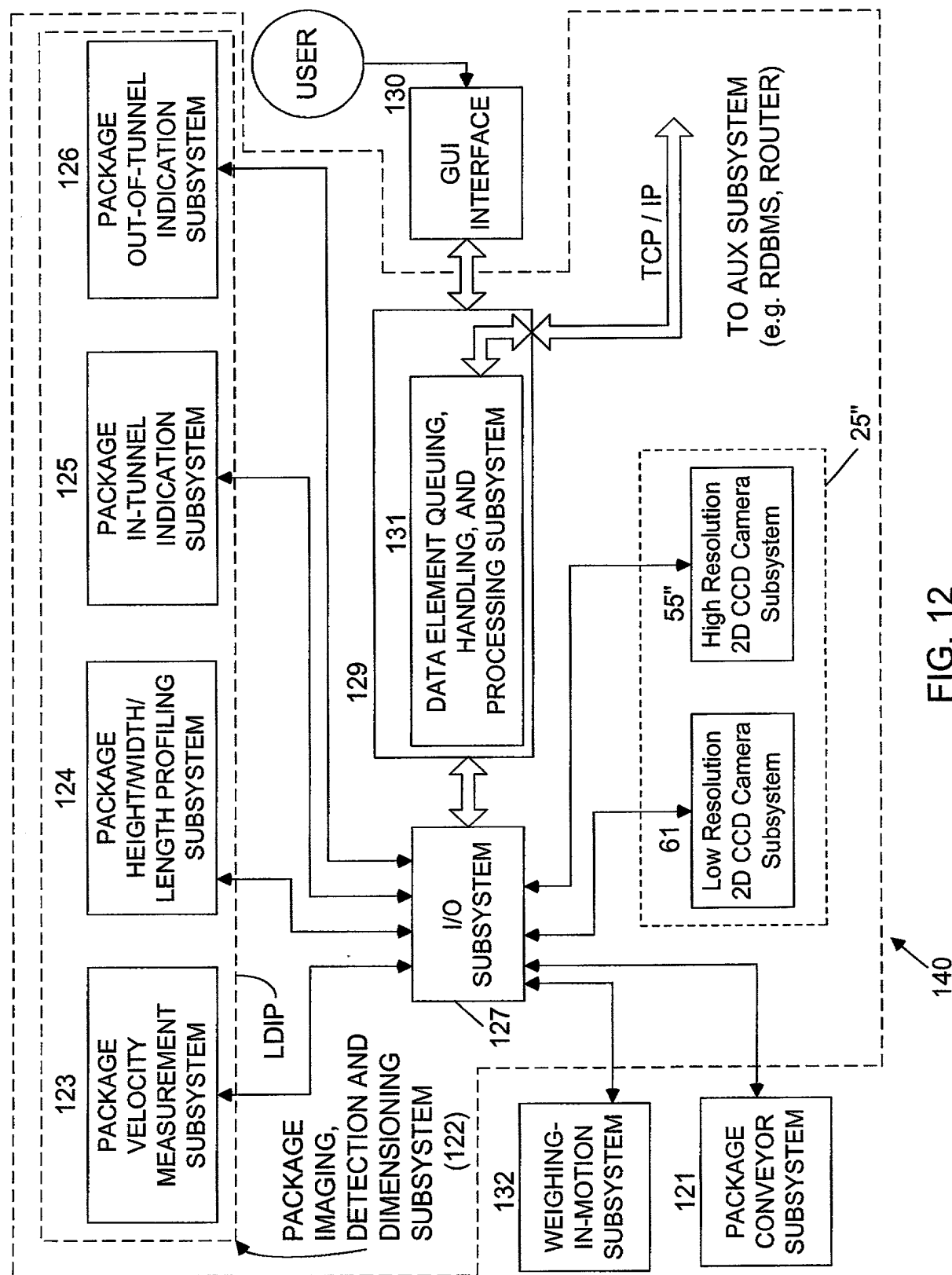


FIG. 12

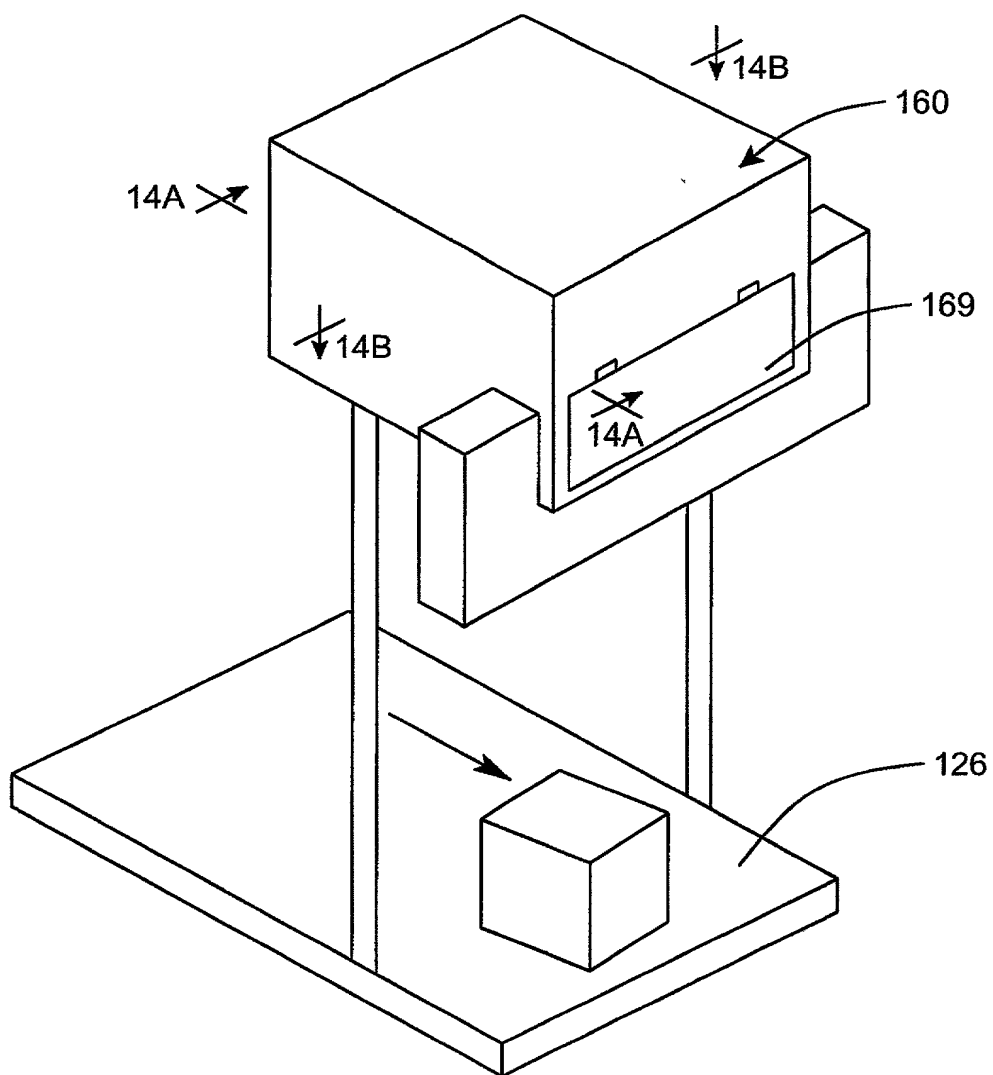


FIG. 13

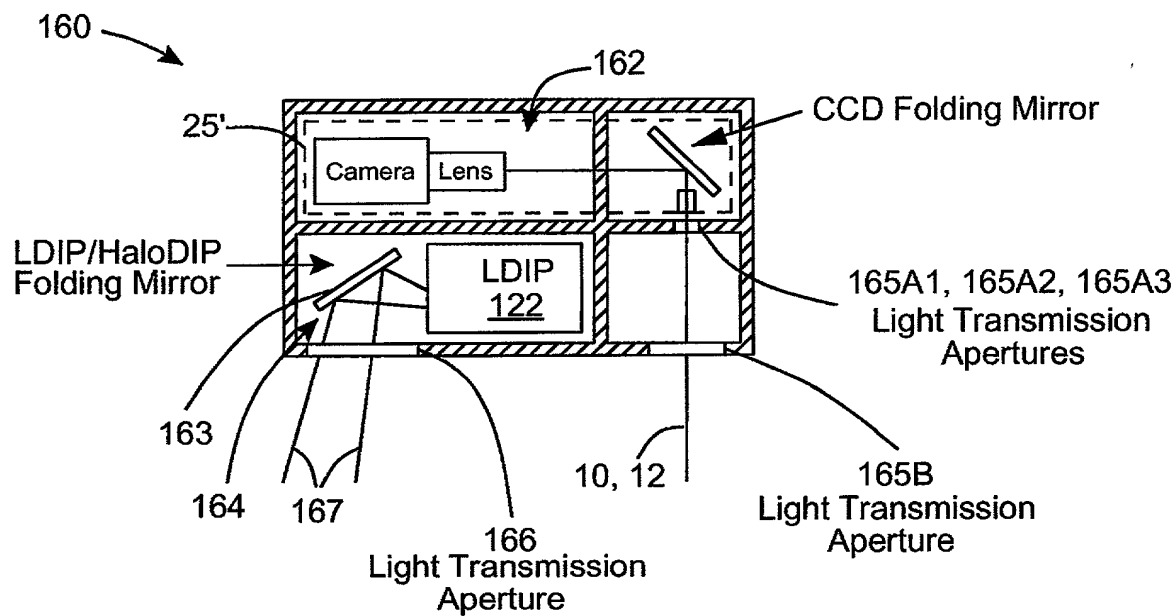


FIG. 15

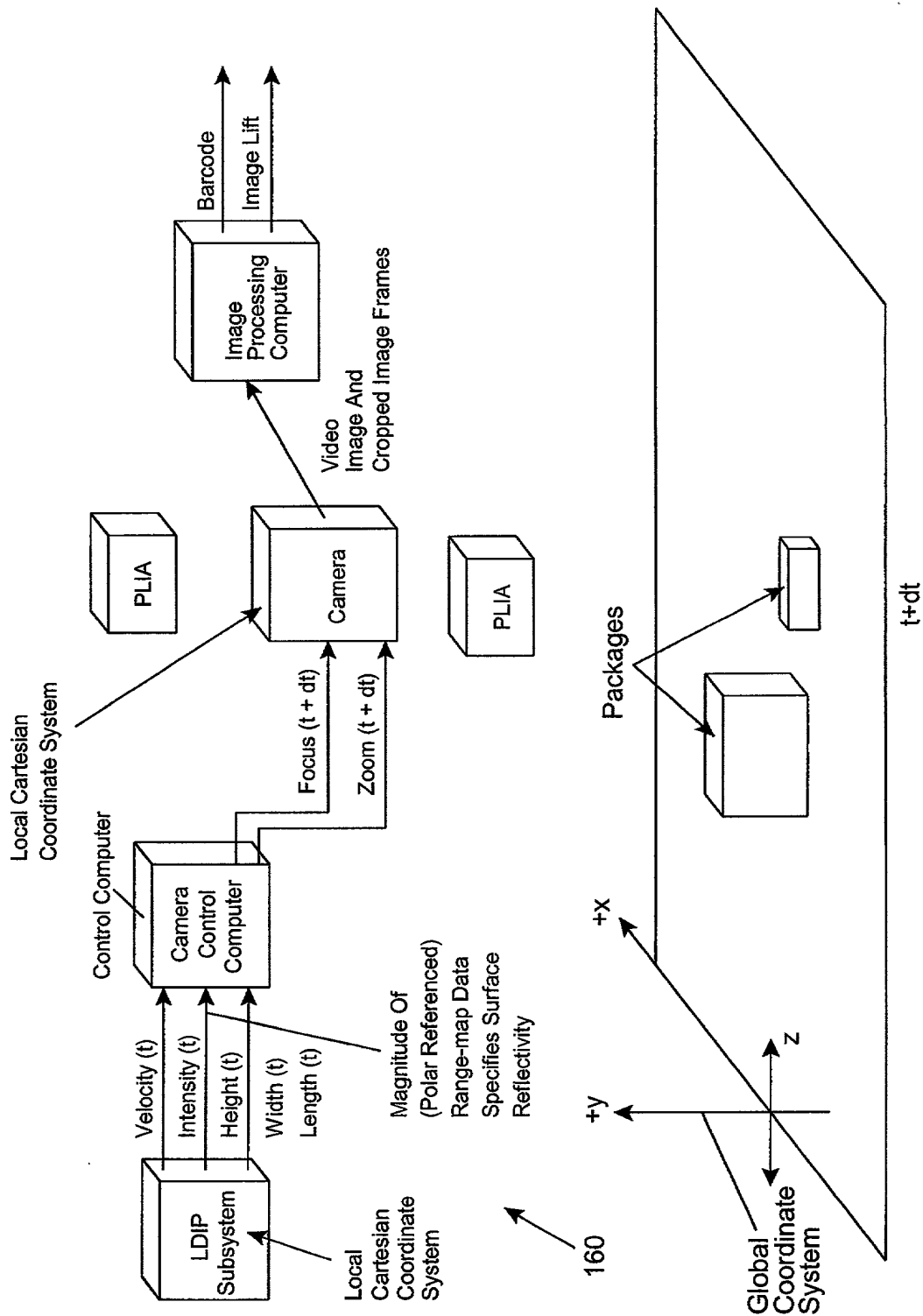


FIG. 16